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ABSTRACT

This document includes three products of an international meeting on productive work in education. First, the secretariat working document addresses itself to problems arising from the introduction of productive work into general (elementary and secondary) education. It examines recommendations on this issue, reviews relevant documents from UNESCO meetings, describes various education-work experiments, investigates the objectives assigned to them, and explores the impact of productive work schemes on the planning, organization, and operation of the educational system. The second part of the document presents 14 papers by meeting participants. Topics include: productive work as an element of general education in Yugoslavia, the alteration of education/work schemes to fit the political/social contexts of the adopting society, productive work in Cuba, productive labor and education in China, the Beninese experience in education/productive work, work education in Bangladesh, educational development in Nigeria, work and education in India, education and work as an approproach to anticipatory socialization, the development of Tanzanian educational reform, quality and effectiveness of work experience programs in Third World schools, and productive work in education in Vietnam and Gulf Arab States. The final report of the meeting, included as the third portion of this document, offers a rationale for the introduction of productive work in education; considers the impact on and consequences for structures, contents, methods, and educators; addresses new problems of program evaluation; and lists participant suggestions. (YLB)

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International Meeting of Experts on the Promotion of Productive Work in Education

Secretariat working document
Elements of reflections proposed by the participants
Final report

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UNITED NATIONS EDUCATIONAL,
SCIENTIFIC AND CULTURAL ORGANIZATION

INTERNATIONAL MEETING OF EXPERTS ON THE PROMOTION OF PRODUCTIVE WORK IN EDUCATION

(Paris, Unesco House, 24-28 November 1980)

SECRETARIAT WORKING DOCUMENT

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(ED-80/CONF.627/COL.2)

I. Aims of the document

1. This working document has been written for those attending the International Meeting of Experts on the Promotion of Productive Work in Education. Although the introduction of productive work into education is part of a wider issue covering all aspects of the relationship between education and work (manpower planning, pre-service training, technical and vocational education, etc.), this document will confine itself to the problems arising from the introduction of productive work into general (elementary and secondary) education.

On the one hand, it examines the recommendations made by the Conferences of Ministers of Education of Member States on this issue and the documents resulting from meetings organized by Unesco on the same subject and, on the other hand, it tries to turn to account the lessons learned from experiments being conducted in various Member States today. It is not our intention to undertake an exhaustive review of experiments in introducing productive work into education or to present a critical evaluation of such projects. Our object is simply to make a contribution to the discussions of the experts attending the meeting by indicating the particular characteristics of each experiment.

As the introduction of productive work into education is a complex matter, it seemed wise to adopt a dialectical approach. This document therefore endeavours to describe the various types of experiment, to examine the objectives assigned to them and to explore the possible impact of productive work schemes on the planning, organization and operation of the education system.

A second document prepared for the same meeting entitled "Some experiments in combining productive work and educational programmes" will look at recent experiments or experiments currently in progress in a number of countries.

2. The concept of productive work is not always very clear and the interpretation given to it correspond to the specific characteristics of the systems of education and production. For this reason, it seemed advisable to present, by way of example, some recent definitions of the concept of productive work in education. Among these definitions, some lay special emphasis on "know-how" acquired by learning production techniques, while others attach more importance to the social, ethical and ideological value and function of productive work. Less frequently, they stress the role that productive work can play, as part of a new alternative approach to education, in generating new interests, knowledge and ideas. According to these definitions, productive work in education is:

> "any learning activity where the skills of production are acquired through actual productive activity" and the "mental process usually accompanied by manual activity. But not all mental activity or manual work is educationally productive"...;(1)
>
> any socially useful work ... which includes, on the one hand, productive activities proper (industrial, agricultural, artisanal) as well as service activities and intellectual and artistic activities in real working situations;(2)
>
> "the 'production' in the learners of a range of understandings, commitments, attitudes and skills ... entailing responsible participation in functional life tasks ... and ... a learning experience generating socially useful skills, understandings and attitudes"...;(3)

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1. Malcolm S. Adiseshiah, "Education and productive work in India" in "Learning and working", Unesco, Paris, 1979, p. 138.
2. cf. IBE, Interaction between education and productive work, Questionnaire No. 2, ED/IBE/CONFINTED/33/Q.2/80, Geneva/Paris, 1980.
3. A. Pain, "Education and productive work", Educational documentation and information, Unesco/IBE, Paris/Geneva, 1978.

"giving pupils a love for work and the deep conviction that they must make a personal contribution to society. Education of this kind lays the foundation for the inculcation of high moral principles and beliefs";(1)

the whole range of intellectual or manual activities contributing to the satisfaction of individual or communal needs, e.g. food, health, culture, social balance, etc. and facilitating the development of human capacities for the integration of the individual into society.(2)

II. The notion of productive work in Unesco documents and publications

3. It is appropriate to begin with a description of the gradual emergence of the concept of productive work and the problems relating to it through the work of Unesco. We shall therefore take a brief look at the proceedings of the various seminars, conferences and meetings on the subject that have been held, sponsored or encouraged by Unesco in Paris and elsewhere in order to get a better grasp of the meaning and scale of the problem of promoting productive work in the educational process today, and to clarify and interpret more fully the importance and interest attached to it by the Organization and its Member States.(3)

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(1) N. Semykin, "Introduction to, and education for, work in Soviet schools", in Learning and working, Unesco, Paris, 1979.

(2) Education and productive work, Final Report, Regional Seminar, Unesco/NEIDA, Porto Novo (Benin), 1-12 October 1979.

(3) We shall be referring to:
- the International Conference on Education, 34th session, Geneva, 19-27 September 1973, Final Report, Unesco/IBE, 20 November 1973;
- Unesco General Conference, eighteenth session, Revised Recommendation concerning Technical and Vocational Education, Paris, 19 November 1974;
- the Conference of Ministers of Education of African Member States, organized by Unesco with the co-operation of the OAU and the ECA, Lagos (Nigeria), 27 January-4 February 1976, Final Report, Unesco, Paris, 14 June 1976, ED/MD/41;
- the Conference of Ministers of Education and those Responsible for Economic Planning in the Arab States, organized by Unesco in co-operation with ALECSO, Abu Dhabi (United Arab Emirates), 7-14 November 1977, Final Report, Unesco, Paris, April 1978, ED/MD/50;
- the Fourth Regional Conference of Ministers of Education and those Responsible for Economic Planning in Asia and Oceania, organized by Unesco with the co-operation of ESCAP, Colombo (Sri Lanka), 24 July-1 August 1978, Final Report, Unesco, Paris, October 1978;
- the Regional Seminar on Education and Productive Work, Unesco/NEIDA, Porto Novo, 1-12 October 1979;
- the Regional Seminar (category VII) for Directors and Specialists from National Training Institutions on the Training of Teachers, Inspectors and Teacher Educators for the Introduction of Productive Work into Education, Baghdad (Iraq), 24-28 November 1979, Report, Unesco, ED-79/CONF.704/4, April 1980;
- the Regional Conference of Ministers of Education and those Responsible for Economic Planning of Member States in Latin America and the Caribbean, organized by Unesco with the co-operation of ECLA and OAS, Mexico City (Mexico), 4-13 December 1979, Final Report, Unesco, Paris, March 1980, ED/MD/58;
- the Subregional Workshop on linking Science and Technology Education with Productive Work, Unesco, Sofia, 9-15 December 1979;
- the "Consulta Regional que tiene por objeto determinar el modo de mejorar la relación entre tipos, formas y niveles de educación, con la finalidad de promover la democratización de la educación y el fortalecimiento de la vinculación permanente", Quito (Ecuador), 3-7 March 1980, Informe final, Unesco, Paris, 17 April 1980, ED-80/WS/-5;
- the Third Conference of Ministers of Education of Member States of the Europe Region, Sofia, 12-21 June 1980.

The Unesco documents that will be referred to fall into different categories. On the one hand are documents emerging from the General Conference, such as the C/5 (Unesco Programme for a biennium or triennium (1981-1983)) and C/4 (Medium-Term Plan), approved by all the Member States of Unesco, or from conferences of ministers of education, which are regional meetings at which ministers of education (and in some cases also, ministers responsible for economic planning) lay down educational policy guidelines which reflect and/or may influence national policies. On the other hand are the conclusions of the meetings of experts convened by the Director-General.

4. At the 34th International Conference on Education, held in Geneva in 1973 on the theme "Education, training and employment", the question of the relationship between education and employment was placed on the agenda, since productive work has to be seen as part of the overall educational process. Clearly, this idea is bound to raise problems. For instance, does it mean that education must henceforth be considered as a service whose sole aim is to prepare young people for their "entry" into active life? Should employment become the ultimate goal of education? The delegates to the Conference answered this question in the negative since in their view, education should help to prepare people not only for employment but also for individual happiness and for participation in the social and cultural life of the community, as well as contributing to the fulfilment of individual aspirations and to the full development of the personality.(1)

This basic function of education becomes a necessity for developing countries whose expenditure on education accounts for a large proportion of the national income. Education must be made to pay and a balance must be struck between the various objectives. It emerges clearly that the question of linking education with the experience of productive work is conceived of and, more importantly, presented in terms of "alternating periods" of study and work and in terms of productive activities at school.(2)

In 1973, the integration of the school with the world of work was explicitly conceived as a "flexible education-training system comprising school and non-formal activities and other possibilities of linkage and passage, reconversion and mobility that are provided within the system and the world of work", the system as a whole being designed to help "orientate the child, then the adult, throughout his or her educational and vocational life".(3)

5. Recognizing the instructive value of work at the three levels of knowledge, know-how and ethics, and considering work to be a part of the educational process, the Unesco General Conference, at its twentieth session, held in Nairobi in 1978, approved the theme relating to the interaction between education and productive work. Thus, in the Postface to the Draft Adjustments to the Medium-Term Plan (1977-1982) document 20 C/4 II, paragraph 69) it is stated:

> "If it is to make a full contribution to development, education, while keeping its own aims in view, must be closely linked to the working world. The idea is both to provide training for working life through education and to make working experience an element in the educational process itself. In this respect, Member States in different regions have performed various experiments involving the inclusion of productive activities in educational activities. This inclusion of work in the very content of education finds its chief justification in the training value it affords, not only with

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(1) International Conference on Education, 34th session, Geneva, 19-27 September 1973. Final Report, Unesco/IBE, Paris, 20 December 1973, ED/MD/29, para. 35, p. 19.

(2) International Conference on Education, ibid. paras. 39 and 40, p. 19 and para. 20, p. 17.

(3) ibid. para. 48, p. 20.

regard to the acquisition of knowledge and know-how but above all from an ethical standpoint, since it emphasizes the profound dignity of productive work".

The question of the relationship between education and work underlies the lifelong education scheme which has been the subject of numerous conferences of the ministers of education of the various regions (Africa, the Arab States, Asia, Latin America). These conferences have helped to develop ideas and lay down guidelines for the introduction of productive work into education, particularly as regards the objectives and methods of linking education and work on the basis of the results of experiments conducted in various Member States and in accordance with the need for, and the degree of urgency of, training fully conscious citizens and future productive workers.

6. Education based on work and planned in terms of work requirements should, in the opinion of the ministers of education of the African countries (Lagos, 1976), "break down the barriers of prejudice which exist between manual and intellectual work, between theory and practice and between town and countryside".(1) Another problem seems to be of great importance, especially for the African ministers of education who considered "the financing of education to be a major obstacle to its development in African States" and that "the absence of ... primary school training slanted in the direction of production is one of the obstacles to quantitative and qualitative progress in education in Africa".(2)

It was evidently in the light of this major concern that the Lagos Conference recommended that African Member States should "effectively integrate the school with life", chiefly by such means as:

the general introduction of productive practical work in schools offering general, technical or vocational courses, whether at primary, secondary or higher level;(3)

the introduction of productive work as one of the elements in the education of the child;

the suitable qualification of pupils in accordance with the main development sectors of the nation;

the organization of schools in such a way that they may eventually become self-managed and self-financed units and relevant to the social, economic, political and cultural setting of each country.(4)

7. As far as the Arab States and indeed a large number of other countries are concerned, the most urgent problem remains the training of the leaders of development. With this end in view, the ministers considered at the end of the Abu Dhabi Conference (1977) that "greater efforts should be made to orient education towards the world of work and major importance should be accorded not only to the various forms of manual work but also to productive work, by reason alike of the contribution it makes to increasing the productivity of education systems and of its educational value".(5) Some of the participants in this

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(1) Final Report of the Conference of Ministers of Education of African Member States, organized by Unesco with the co-operation of OAU and ECA, Lagos (Nigeria), 27 January-4 February 1976, Unesco, ED/MD/41, Paris, 14 June 1976, Declaration para. 2.2 (v), p. 30.

(2) ibid. Recommendation 1, p. 35.

(3) ibid. p. 36, Recommendation 8.

(4) ibid. p. 37, Recommendation 2-2, p. 37, Recommendation 3 (i).

(5) Final Report of the Conference of Ministers of Education and those Responsible for Economic Planning in the Arab States, organized by Unesco in co-operation with ALECSO, Abu Dhabi (United Arab Emirates), 7-19 November 1977, Unesco ED/MD/50, Paris, April 1978, p. 14.

Conference said that in a context of "overall development", full employment was not linked with education alone but also with the development of socio-economic conditions and factors. Others tended to stress, over and above the links between the education system and socio-economic development at all levels, the necessity of encouraging and promoting vocational and technical education through the introduction of manual education and training into primary-school curricula and the provision of guidance and counselling in general secondary schools. Similarly, they felt that attention should be directed to the establishment of links between vocational and technical education on the one hand and productive work and industrial enterprises on the other, so as to ensure the maximum level of compatibility between supply and demand in the employment market.(1)

8. The ministers of education of the Member States of Asia and Oceania and the ministers responsible for Economic Planning, who met in Colombo in 1978,(2) drew attention to the need to interlink values relating to education and those relating to work. In their view, if education is to be made to contribute to:

> the development of the personality of the child, concentration on "bookish" learning and the separation of the child from the context of action and work must be avoided. Hence, the education of the child should strike a balance between theory and practice and between manual and intellectual work;(3)
>
> community development, the links between school and community must be tightened and young people involved in community activities. This seems to be a constant concern common to numerous experiments in introducing productive work into general education;
>
> economic and social development, young people must be involved in national development: this is an essential objective for numerous developing countries, notably those experiencing rapid industrialization.

9. The Ministers of Education and those Responsible for Economic Planning of Member States in Latin America and the Caribbean(4) stressed the role of work - when properly incorporated in school curricula - as a factor contributing to education and to individual and social development. However, some participants stated that despite "recognition" of the educational, economic and social values implicit in the linking of education with work, the problem of the division between manual work and intellectual work perpetuated by the traditional education system was still acute, but could probably be solved through "schemes combining periods of study with periods of practical or production work, particularly in rural zones" (p. 30).

10. Finally, at the Third Conference of Ministers of Education of Member States of the Europe Region(5) held in Sofia (12-21 June 1980) it was pointed out that to date, the major question arising in connection with the introduction of productive work into education remained the absurd distinction between technical and vocational schools and general academic establishments. This dichotomy, deemed false and anachronistic, had to be eliminated because in the view of

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(1) ibid. pp. 18 and 19.

(2) Final Report of the Fourth Regional Conference of Ministers of Education and those Responsible for Economic Planning in Asia and Oceania, organized by Unesco with the co-operation of ESCAP, Colombo, 24 July-1 August 1978, Unesco ED/MD/53, Paris, October 1978.

(3) ibid. para. 32, p. 18 and para. 15, p. 33.

(4) Regional Conference of Ministers of Education and those Responsible for Economic Planning of Member States in Latin America and the Caribbean, organized by Unesco with the co-operation of ECLA and OEA, Mexico City, 4-13 December 1979.

(5) Draft Final Report, Third Conference of Ministers of Education of Member States of the Europe Region, Sofia, 12-21 June 1980.

some degree, the learning of manual and non-manual skills really constituted an entity within the same global learning experience, the central objective of which is understood to be the provision of "a grounding in the essential principles underlying production processes and in the use of the basic instruments employed in those processes".

11. At its twenty-first session, held in Belgrade in October 1980, the Unesco General Conference asked the Director-General (21 C/5) to pursue activities designed to strengthen the links between education and working life - especially the interrelationship between education and productive work - and between school and out-of-school education in the context of lifelong education, and to intensify inquiry into the future development of education. This resolution is reflected in research programmes, support for operational projects and regional consultations. The same General Conference also adopted the "Preliminary Report of the Director-General on the Medium-Term Plan for 1984-1989". The subchapter "education and the world of work" emphasizes that the task of education is to prepare for working life and not only for employment. The Report also stresses that the true purpose of work in school is to foster in students a positive attitude towards all forms of human creative endeavour.

12. With regard to the meetings of experts on the question of the relationship between education and productive work, reference will be made to three seminars organized by Unesco, one in Africa,(1) one in Latin America(2) and one in Asia.(3)

Taking as its point of departure the recommendations made to African Member States at the Lagos Conference, the NEIDA Regional Seminar set out to shed light on the innovative value of some ten selected projects in the context of the overall or partial reform of education systems in Africa. A critical examination of these projects revealed a series of major problems, chiefly at the structural and infrastructural level, relating to educational strategy, financial resources, the inadequacy or lack of places in which to conduct experiments, especially in rural areas, teaching staff, and the languages of communication used in implementing the projects. A large number of participants in the Seminar were of the opinion that the process of integrating work into educational curricula was conceivable only if the work in question fitted into overall development-oriented projects.

Thus, the various experiments in linking education and productive work are associated with overall reforms of the education system or with a particular productive activity in a given sector of the socio-economic system of the countries concerned. Such innovative projects should therefore enable the school to play a central role in national development by directing education towards productive work, introducing young people to a variety of productive activities with a view to turning them into responsible citizens and agents of change in their environment, who do not hold manual activities in contempt. Attitudes of this kind should contribute to educational innovation based on active methods and on environmental studies.

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(1) Education and Productive Work, Final Report, Regional Seminar Unesco/NEIDA, Porto Novo (Benin), 1-12 October 1979.

(2) Consulta regional que tiene por objeto determinar el modo de mejorar la relación entre tipos, formas y niveles de educación, con la finalidad de promover la democratización de la educación y el fortalecimiento de la vinculación entre la escuela y el mundo del trabajo con miras a la educación permanente, Quito (Ecuador), 3-7 March 1980.

(3) Regional Seminar on Technical and Vocational Education in Asia and Oceania, Singapore, 20-27 November 1979.

At the meeting in Quito, it was observed that one could not speak of the labour market in general, but that one had to refer to different labour markets, having regard to development characteristics, different socio-economic environments, and affiliation or otherwise to a structured working world. It was also emphasized that the present division between work and education had roots that ran deep and that must be attacked if the dichotomy was to be eliminated.

One of the objectives of the Singapore seminar was to shed light on certain aspects of productive work in the context of technical and vocational education.

In this connection, it was specially recommended that students' productive activities should be considered with the overall learning process in mind, and that productive work should be incorporated in school curricula at a very early stage.

III. Provisional results of experiments

13. In the last few years, numerous experiments relating to the link between education and work have been conducted in various parts of the world.(1) To appreciate the variety and complexity of these experiments, they must be seen in the light of two main criteria which determined their choice:

(i) the quantity of information available about the experiments;

(ii) the historical and geographical origin of the experiments (development trends and classification according to regions of the world and areas within these regions);

and examined from the following three standpoints:

(i) the objectives connected with and arising out of the educational policies that influenced the launching of the experiments;

(ii) the impact on social, economic and cultural life and on "practical ideologies" which reveal the explicit or implicit repercussions of the experiments;

(iii) the problems encountered by the principal initiators of the experiments.

(i) Objectives

Some of these experiments were devised in application of national educational policies. Their purpose is to provide an appropriate answer to the desire for the reform and renewal of existing education systems or else - for the furtherance of a cause - to give practical expression to or justification of the principles or "practical ideologies" governing socio-economic choices in particular countries.

Other experiments are more modest in their ambitions and more limited in time and/or in space. Although they are sometimes less elaborate, they none the less seem more realistic and innovative than the preceding ones from the point of view of planning, orientation, location and methods of organization and management. They are generally conducted by local communities engaged in a struggle for survival, for the safeguarding of their identity and the satisfaction of their immediate needs.

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(1) cf. Quelques expériences combinant le travail productif et les programmes d'enseignement, Unesco, 1980.

Such educational experiments, frequently arising from situations created by national liberation struggles, struggles against centralized power structures, against social, economic and cultural inequalities of disparities and struggles for the liberation of the individual and the autonomy of communities, attempt to stay close to the actual situation and living conditions of the communities or regions where they originate. They enable them to become self-aware and to assert themselves as active participants in communal life.

Thus, a number of educational activities directed towards the introduction of productive work into school curricula seem to reflect openly or latently a general uneasiness with existing school systems which are deemed inefficient and anachronistic. However, it appears that the major objective of experiments of this kind is neither to replace education systems nor to overthrow them but rather to strengthen them or diminish their rate of failure. The question therefore arises as to whether insistence on the moral and educational value of productive work, recognition of manual work as an activity worthy of respect and its incorporation in the life of the school are sufficient to bring about changes in educational structures.

Some experiments in linking education and productive work conducted in very different contexts are designed essentially to reorientate education systems and to lead to "planned" functionalization if not vocationalization.(1)

In such cases, the aim is to establish a school of life through work, to eliminate or at least reduce the gap that has hitherto separated education from the reality of working life and book learning from practical knowledge (know-how), and to remedy the inability of schools to offer students the skills necessary for their entry into working life. The educational objectives adopted reflect the political and/or ideological orientation of the countries concerned. Thus, in some countries, the introduction of productive work into school curricula is related to political choices and to the principles governing the organization of society. In such cases the introduction of productive work into educational projects is seen, on the one hand, as a pre-condition and a means for creating the "liberated individual" and, on the other, as an instrument of national liberation and reconstruction and the best possible way of ensuring the autonomy of the community and its participation in the life of the school.

A concern common to most of the educational experiments examined is to ensure that education not only yields immediate productive results but also makes a significant contribution to the transformation of values and the strengthening of the work ethic. A question which therefore arises is why the various educational experiments visualize the student almost exclusively as someone in the process of becoming a "working man" or "productive man" and only very rarely in his capacity as "social man", as an active participant in the development of his personality. Is it mere chance that the cultural dimension is overshadowed by the ruling ideologies which give their approval to the economic and political powers that be? It seems desirable to investigate the importance attached, in the various educational experiments examined, to the introduction of manual activities (agricultural work, craftwork, stock-raising) into school curricula. What is really at stake? Far from helping to contain the exodus from the countryside, could not the upgrading of manual work and its recognition as a basic element in rural development in most countries today, become in the long run an additional factor in the isolation of rural communities? These are being increasingly threatened by the contemporary phenomenon of "modernized poverty" and by the unequal distribution of goods and wealth not only within the same country, between different classes of workers and between town and country, but also and above all between rich countries and poor countries.

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(1) For more detailed information see M.E. Sinclair, "Introducing work-experience programmes in Third World schools: a review" in *Learning and working*, pp. 51-79, Unesco, 1979, and M.S. Adiseshiah, "Education and productive work in India", ibid. pp. 137-140.

This is a question that arises concerning both recent and earlier educational experiments and concerning projects whose principal aim is to reorientate existing education systems with a view to settling problems of school organization or to improving living standards and conditions in local communities, especially in the economically, socially and culturally most deprived areas where the population is usually very scattered (e.g. mountainous regions where schools are still few and far between).

In addition to experiments governed either by general educational legislation or by government provisions, a number of educational experiments are noteworthy on account of their origins and development. For example, in certain Latin American countries, agricultural reform is accompanied by reform of the educational system and the introduction of new and original educational activities. These activities are generally undertaken with a view to combating the social poverty and injustice suffered by the peasant classes by improving their standard of living, devising educational projects that are more appropriate to their way of life and needs, and promoting educational procedures rooted in the life of communities and relating without discrimination to all categories of country-dwellers, regardless of age.

Some relatively autonomous educational establishments, supported either by local communities or by the educational authorities, set out to promote educational and productive programmes whose primary aim is not only to respond in a tangible way to their needs and aspirations and to the socio-economic problems arising from the environment in which they are located, but above all to enable the different social groupings (companies, communities, families, associations) to become aware of the advantages of concerted action and of "collective lifelong education" based on joint action by local communities and schools.

(ii) Impact

In assessing the impact of the experiments on the various components of the educational system and on society, the following indicators may serve, among others, as points of reference:

evaluation of "know-how" in final examinations;

participation of teachers in work experiences;

participation of non-teachers in educational activities and their acceptance by the educational establishment;

transformation of the teacher-pupil relationship with a view to co-operation in the execution of collective tasks;

alteration of teachers' and pupils' value systems in regard to work;

improved community organization and involvement;

opening-up of the structures of production to educational experimentation;

relationship between pre-service and in-service training;

more effective links between formal and informal education;

new attitude to work, especially the relationship between intellectual work and manual work;

full utilization of local material and human resources;

establishment of new services in the villages (education support committees, community advisory committees on education, bringing scattered populations closer together, committees on hygiene, production committees);

etc.

(iii) Organization

With regard to the methods of organizing experiments combining education and productive work, the report on the promotion of productive work in school curricula in Argentina(1) identifies four principal methods of organizing the relationship between education and productive work.

(a) School curricula and productive work are treated as parallel activities. There is no link between the two and because of this mutual isolation, the education timetable and the work timetable do not correspond in any respect, although according to the writer, declarations of intent in this connection are always based on the assumption of integration of the two aspects.

(b) Curricula are subordinate to productive work. In such cases, curricula are worked out on the basis of the type of qualifications anticipated and the needs of the economy.

(c) Productive work is subordinate to academic curricula. Work is viewed as an educational factor and a means of instruction free from all productivist aims. This "educationally useful work", as it is now frequently termed, is used to illustrate theoretical knowledge deemed excessively abstract. This is particularly the object of workshop, laboratory or gardening activities, etc., the students involved being completely unconcerned about the profit they may derive from such projects.

(d) Academic curricula and productive work are combined. The time devoted to the two activities is redistributed and the school timetable reorganized to enable allowance to be made for practical activities in the curriculum. In some countries, the average time devoted daily to various productive activities may seem highly "significant", varying from one to three hours. In other countries, productive work is done outside school hours and may or may not be recognized by the school.

The above review is not exhaustive and must be interpreted in the light of the socio-economic or education system in which the experiment is conducted.

In our tentative outline of the main aspects of experiments in combining academic curricula and productive work, we have so far not considered the major problem of the politics of the government in power and its implications for the promotion and control of such educational experiments. This problem is of fundamental importance for anyone attempting to understand the nature and aims of the various educational experiments now being conducted in a number of countries.

Hence, the main task is to determine objectively the influence that a country's political orientation may have on the initiation and development of educational experiments. Ultimately, experiments combining work and education may be considered to result from two different approaches. In some cases they derive from an initiative on the part of the educational authorities and aim to reform the education system and make its activities increasingly rational. In other cases, they reflect a real or concealed demand on the part of communities for control of the means and networks of knowledge and education.

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(1) S.L. Brusilovsky, *La promoción del trabajo productivo en los programas escolares*, Unesco, April 1979, p. 13.

These two approaches are encountered again in examining the objectives of the various educational experiments in combining productive work and educational curricula, in the types of activity noted and in the kinds of supervisory authorities responsible for co-ordination and finance.

IV. Description of the objectives, activities, management structures and organization of experiments in linking education and productive work

14. The analytical grid which follows may help to illustrate the various aspects of the problem of introducing productive work into education. The Y axis shows objectives (1), the X axis activities (2), and the Z axis management structures and organization (3).

(1) Objectives

M.E. Sinclair provides a general survey of the objectives frequently assigned to the introduction of productive work into education. They consist in giving pupils knowledge and skills leading to increased productivity in manual occupations, the ability to participate in village-level organizations such as co-operatives, etc.; conveying useful knowledge and skills to "backward" communities; influencing pupils' attitudes, especially to create a habit of, acceptance of, and positive motivation towards manual occupations or rural life; developing qualities of character conducive to social stability and worker productivity as well as to personal welfare, and moral qualities such as perseverance, accuracy, creativity, self-reliance, co-operation, etc.; lowering the unit costs of schooling and making the experiments self-financing through the sale of industrial, craft and agricultural goods produced by pupils in workshops, on farms and in school gardens; attracting pupils to school, improving the effectiveness of the curriculum through greater local relevance and the use of activities as a learning aid and as a rest from mental work.(1)

This survey enables four basic types of objective to be identified: economic, social, educational, and political and ideological.

(a) Economic objectives

The introduction of productive work into academic curricula is intended first and foremost to help make education systems more relevant to economic needs. A primary concern is to alleviate the constraints imposed by the economic situation and to ensure that education is organized in such a way as to become an effective means of obtaining employment. The incorporation of productive work into academic curricula should provide children with opportunities of participating in social and economic activities inside and outside the classroom, enabling them to understand the scientific principles and processes involved in different types of work and in the specific physical and social circumstances attendant on that work.

Moreover, the steps taken in various countries to upgrade and inspire respect for manual work, especially in rural areas, not only help to develop the manual skills of students and introduce them to manual work but aim also to familiarize them with the mechanisms of the world of work and teach them the basic principles of productivity. This is why many countries frequently recommend that the quality of schools, teachers and students should be improved so that they become the agents of economic growth.

A look at the various experiments shows clearly that such aspects are common to all countries, both developing and developed. Moreover, it is quite evident that in all the experiments considered above, the economic objectives

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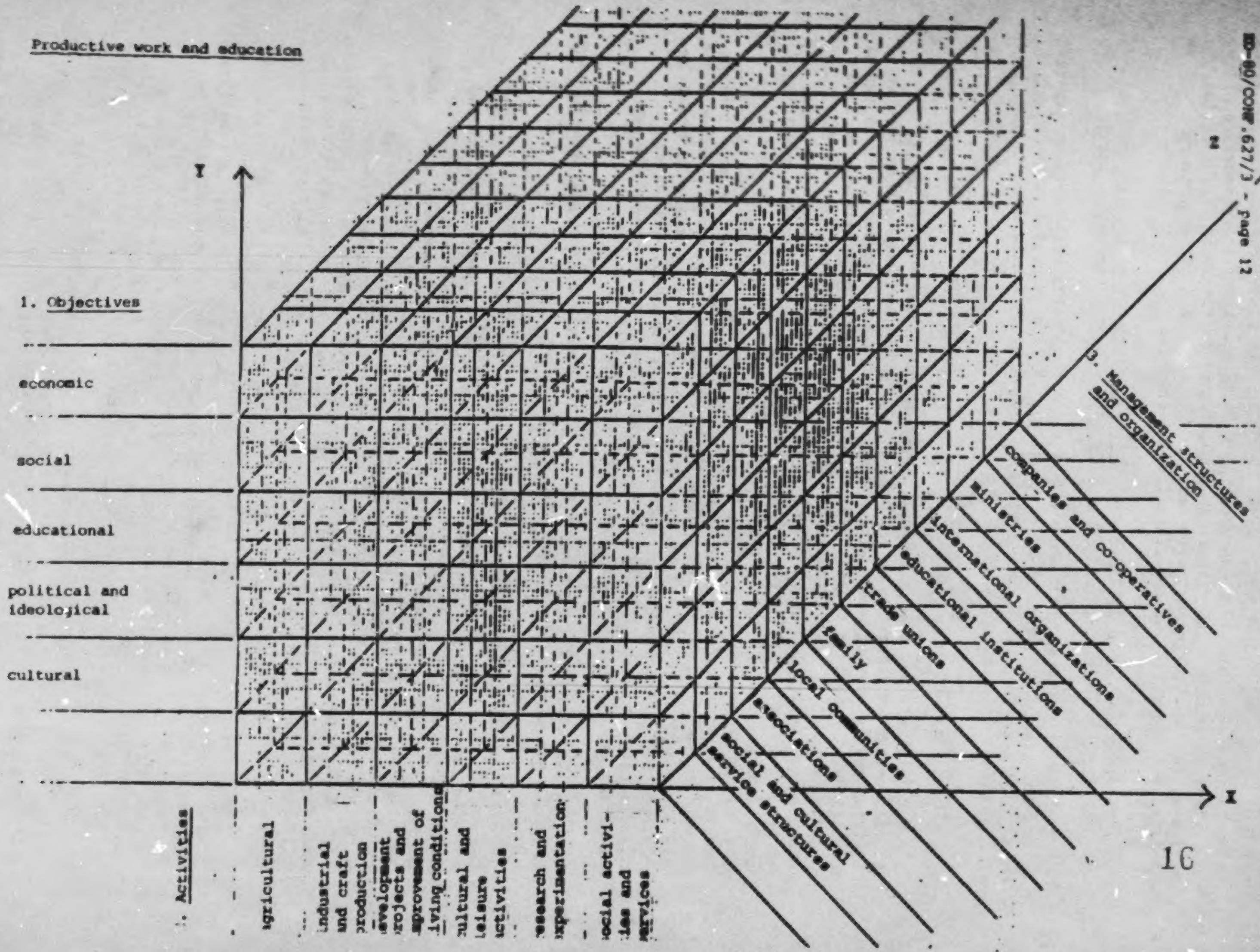
(1) M.E. Sinclair, "Introducing work-experience programmes in Third World schools: a review", in Learning and Working, Unesco, 1979, pp. 55-56.

Productive work and education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3. Management structures and organization
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ministries
international organizations
educational institutions
trade unions
family
local communities
associations
social and cultural service structures
X

of the educational projects designed to link work and education are specifically chosen with a view to preparing students for productive work and to vocationalization or even specialization so as to guarantee a supply of qualified manpower vital for national economies.

In this connection, it is important that the vocational tendency of education should help to reconcile the interests of the individual and those of society.

In another context, the polytechnical approach to educational development in some countries confirms the economic dimension of the objectives assigned to the introduction of productive work into education. The content of educational curricula is designed to enable students to acquire a basic grounding in production and technology and to learn productive techniques. Above all, it is designed to give young specialists an opportunity to apply modern techniques. In this connection, the major concern of numerous developing countries seems to be the creation of "producers" and active agents of endogenous development.

In some cases, the association of work and education is viewed as a remedy for the scarcity of financial resources. The authorities principally responsible for educational policy feel that this new educational procedure based on productive work should bring down the costs of education by leading to the partial self-financing of schools, the income earned by pupils and their teachers going towards the financing of the schools' activities. Thus in rural areas, the work of pupils, parents and local communities may help to reduce or even eliminate public expenditure in connection with building and equipment projects and the assumption of responsibility for new experiments which do not receive State support either because the State does not have the resources or because it is unwilling to give its backing to initiatives that do not come under its authority.

Hence, the productive work undertaken by students as part of their school curriculum, be it in workshops or on farms, is no mere pretence. It is genuine work enabling young people to feel from an early age that they are workers, contributing to the development of their country just like other members of society. This feeling is enhanced when students are able to join the mass of workers in factories, on construction sites, etc. as happens in many countries.

(b) Social objectives

The social objectives linked to the introduction of productive work into the educational process are designed:

to accustom children to the world of work and to performing a socially useful service for the community and to develop in them a respect for manual work and manual workers;

to develop attitudes conducive to team work and socially desirable values such as a sense of community autonomy, the dignity of work, solidarity and mutual aid, etc.,

to provide greater opportunities for equality and social mobility by giving all pupils a common basis of experience, etc.;

to improve the living conditions of local communities co-operating with the schools, etc.

Attempts to reduce the gap between manual and intellectual work or to amalgamate the two in the context of productive work in education are viewed in most countries as an effective means of scaling down social inequalities. In some countries, the introduction of productive work into the educational process is based on an explicit policy of gradually eliminating the dichotomy between manual work and intellectual work and is bound up with the aim of abolishing the division of education into a general stream and a technical and vocational stream.

In other countries, the introduction of productive work into schools seems to be a way of defusing social tensions due to growing unemployment, failure to satisfy the new aspirations of young people, and the rigid and absurd process of selection practised by the education system.

At another level, productive work in schools lays the basis for a democratic education by giving pupils direct experience of the real world. It also puts them in touch with the realities of their own social class and of their fundamental role in society.

(c) Educational objectives

As an institution and a social practice, education is determined by economic and political forces. It cannot be separated from them on any account and hence education is linked to work as a factor of production. But in what way can work make a contribution to educational methods and practice?

In most countries where experiments in linking education and work are in progress, the introduction of work into school curricula is based on the conviction that it will gradually give rise to new attitudes and will change pupils' value systems by emphasizing the dignity and value of manual work. It is also hoped to reduce the distinction between knowledge and know-how by immediately putting into practice the theoretical knowledge acquired by students.

Thus, productive work should encourage the use of parallel learning experience obtained outside educational institutions and the integration of formal and informal learning.(1) A solution to the problem of interdisciplinarity is also being sought in productive work, which can give students access to a vast range of activities, enabling them to benefit from methodical training in both intellectual and productive work.

In another context, productive work promotes and facilitates the development of new relationships between teachers and students and the appropriate teaching competencies and the development of new working relations between teachers of different subjects and also between teachers and skilled workers outside the teaching profession. The introduction of productive work into schools is therefore seen as a way of fostering harmonious relationships within the educational establishment by changing the image of teachers to one of friendly collaborators, giving students a helping hand with their projects.

The spirit in which the various educational objectives are defined reflects the hope that productive work will unify the manifold components of the educational process.

(d) Political and ideological objectives

The various experiments in introducing productive work into educational programmes are all based on an implicit or explicit underlying ideology, inasmuch as they are based on certain principles and also inasmuch as the type of work that is central to such experiments reflects a productivist ideology.

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(1) Regional Seminar for Directors and Specialists from National Training Institutions on the Training of Teachers, Inspectors and Teacher Educators for the Introduction of Productive Work into Education, Baghdad, 24-28 November 1979, K. Jackson, Major Working Document, Unesco, ED-79/CONF.4, Paris, 1979.

In that case, the function of the school will be "to encourage children to love work and respect the worker, since work is, in itself, an important factor in the development of the personality; it fosters a positive attitude towards productive activity and respect for the property of the community; it stimulates initiative, perseverence and skill; and it induces profound respect for the producers of consumer goods and services".(1)

(2) Types of activity

The types of activity constituting productive work in the experiments examined are extremely varied. Among the most important, mention should be made of:

(a) Agricultural activities

A large number of experiments involve the integration of agriculture into the curriculum, or conversely the use of theoretical knowledge to improve farming techniques and agricultural produce. As a rule, these activities are organised in and by schools in rural areas with a view to raising productivity and providing employment for young people, thus helping to prevent rural depopulation. The work ranges from the clearing of new ground for cultivation to high-yield, experimental and seed-crop farming, irrigation work and watering techniques, seed gathering, soil testing, experimenting with seeds in different types of soil and using different kinds of fertilizer, making known the methods of cross-breeding plants, soil conservation, the science of plants and their reproduction. In some countries, agricultural activities combining productive work and education are chiefly based on the findings of research and experimentation conducted with appropriate methods and techniques leading to improvements in crop yields.

Where land is scarce and farming techniques less advanced practical activities are on a smaller and less developed scale. They serve primarily to improve the food supply of the local population or the marketing of farm products. Practical agricultural work promotes better relations between pupils, teachers and peasants and between the school and rural society.

(b) Industrial production and craftwork

Curricula assign an important role to productive activities in factories or school workshops. In such cases students learn to plan their projects, to keep their place of work tidy, to observe work safety rules and the rules of personal hygiene, to use tools, to make the best use of time and materials, to master manufacturing techniques and to manage productive processes.

The most common industrial manufacturing activities, especially in countries with a moderately developed industrial infrastructure, are, for instance, the machining of metals by machine-tools, electrical engineering, the manufacture of clothing, graphic design, radio-technology, engineering, woodwork, metalwork, work with plastics, etc.

Other similar activities, but in the field of craftwork, are carried out mainly in developing countries.

They involve construction work, leather work, motor mechanics, textile work, welding, brickwork, electrification, watch and radio repairs, photography, bicycle repairs, tailoring and dressmaking, toy-making, bamboo work, mat-making, pottery, spinning, weaving, etc.

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(1) A.P. Morales; M.F. Araujo, "The combination of study and work in the Cuban educational system", Learning and working, Unesco, 1979, p. 228.

(c) Infrastructure development

In some countries, pupils at rural schools are required to help with building work, road repairs, the redevelopment of certain slum areas, etc.

(d) Improvement of living conditions and structures

Other educational experiments based primarily on work in rural areas aim at improving the quality of food, health and hygiene, for instance by improving the construction of dwellings, manufacturing or repairing domestic appliances, building and repairing roads, etc.

(e) Culture and recreation

This type of work is limited in comparison with the other activities and consists simply in making toys or artificial flowers, decorating crockery or classrooms, designing cards for use on festive occasions, fancy work, creating art objects, etc.

(f) Research and experimentation

This may involve in some cases the application of knowledge acquired by students in mathematics, physics, medicine, chemistry or botany to soil analysis (measurement of acidity, alkalinity, humidity, etc.) as well as other applied research work in phyto-physiology, electronics, radio-technology, etc.

(g) Social activities and services

These generally include voluntary activities, mutual aid at community level, conservation of the heritage and the environment and aid for persons in difficulties, e.g. the sick, the lonely, the handicapped, etc. An example of this type of work are the activities of the Community and Social Service (CSS) of the University of Madras (India) through which students help to solve rural and urban slum problems.

Generally speaking, however, even though it is commonly held that social activities do not form an integral part of productive work, this certainly does not imply that they do not exist. One need only consider, to take one example, the amount of charity work done by youth movements.

(3) Management structures and organization

The management structures and organization of experiments in combining education and work vary from country to country. None the less, it emerges from an examination of educational experiments that they are usually run by:

technical or polytechnical schools whose principal concern is to improve productivity;

local communities (with the participation of parents and the local authorities), who concentrate mainly on improving living conditions and raising the cultural level of the local population;

families;

private or public enterprises, rural communes or production brigades;

social and cultural services;

inter-ministerial authorities with broad responsibility for the financing of projects and experiments. In a large number of countries the supervision of formal or informal educational experiments is entrusted to the ministries of education, agriculture, rural development, health, defence, labour and planning;(1)

international organizations (FAO, ILO, WHO, UNDP, Unesco, Unicef) which usually launch and support pilot projects in this field with a view to helping certain "Third World" countries.(2)

The various bodies involved in the introduction of productive work into education have special responsibilities in regard to the supervision of educational experiments, both in terms of planning, financing and managing activities and material and human resources, and in terms of involving the various components (families, communities, pupils, companies, ministries, associations, socio-cultural services) in the conduct of experiments in combining work and education.

V. Some problems

15. The historical dimension

Why should the promotion of productive work in education have become such a serious problem today?

A brief historical review could provide a useful insight into this. In the history of education in different societies at different periods, relationships between education and work are to be seen against the background of social relationship and relations of production, scientific and technological discoveries and their applications, and hence the social and technological division of work.

In societies in which responsibility for education has not been assigned to a school system, or in which part of the population has been or is largely excluded from official educational structures, there is no discernible separation between activities pertaining to education and activities pertaining to work. Productive activity is interwoven with the other aspects of daily life, such as intellectual and aesthetic activities, play, celebrations, rituals and the like.

In contemporary societies, education and work are in opposition to each other, essentially as a result of the confrontation between the individual or collective aspirations of different social classes and the logic of production.

From an educational and philosophical standpoint, it has always been deemed desirable for education to be associated with man's productive function. Such an association is found in the thinking of a broad spectrum of groups, from Utopian to religious to materialist, but frequently these theoretical efforts bear no relation at all to the reality of educational systems and practices.

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(1) In this connection, the findings of the survey conducted among National Commissions (I. Beraho Beri, The implementation of lifelong education in various Unesco Member States, ED-79/WS/37; Paris, 1979, p. 49) reveal and confirm the fact that these same ministries are frequently directly or indirectly responsible, as organizers or financial sponsors, for experiments in linking work and education.

(2) See, in particular, the reports on the NEIDA Regional Seminar on Education and productive work which was held in Porto Novo (Benin) from 1 to 12 October 1979. See also the example of Bangladesh where Unicef has been conducting a pilot project on agricultural education in primary schools since 1970.

There are many thinkers whose works may be regarded as sources of inspiration for educational experiments centred on work.(1)

In the various philosophical and religious traditions, the relationship between education and work has often been seen in conflicting ways, being regarded variously as an adventure, a source of human creativity and liberation, and as a curse, a harsh necessity or a moral value.

16. Economic and social factors

In every society, such factors as culture, ethnic group, religion, age-group and sex determine the value attributed to work. An education system that seeks to promote productive work in education finds itself confronted with this whole complex of factors.

The introduction of productive work also calls for an examination of economic and social problems. The following variables must be taken into consideration:

(a) forces at work in the labour market and employment structures (division of the labour market, underemployment, unemployment) at local, regional and international level;

(b) educational and/or non-educational dimension of production structures in different countries (by production sectors and categories of employment);

(c) organization of work and workplace bargaining strength possessed by workers, both young people and adults;

(d) the characteristics of worker and peasant cultures, their contributions, and so forth.

New forms of qualification are required by the production system (agriculture, industry and services), not only technical and professional qualifications but social and cultural qualifications as well. These call for work experiments in school that are as varied as possible, so that the student can be oriented towards and become familiar with the world of work in its most general aspects (its social, economic, technological, scientific and other dimensions). It follows that if there is to be a new type of vocational training, one which is not exclusively technical in nature, it must be developed within a context of general education.

The fact that the labour market consists of two sectors, a formal sector and an informal or unstructured sector, is still not recognized by the formal educational system. The informal sector is very frequently characterized by harsh working conditions devoid of social protection, but this need not rule out experiments in education and indirect learning which are worthy of consideration. The various types of economy, such as planned, mixed, market and what are known as "underground" economies, affect several aspects of the relationship between education and work, particularly the planning of education and work; whether the production set-up in training activities is autonomous or dependent; the economic circumstances of students; and productive work as a supplementary source of income for students and/or communities. It should be noted, however, that these different types of economy are not always sharply distinguishable since there is no such thing as a fully planned economy or a perfect market economy. Consequently, the impact of the productive system upon the educational system is very varied.

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(1) The list includes Chu-Tzu (1130-1200), Ibn Khaldun (1332-1402), Thomas Moore (1478-1535), J.A. Komenski (1592-1670), Pestalozzi (1746-1827), J.-J. Rousseau (1712-1778), R. Owen (1792-1858), K. Marx (1818-1883), José Martí (1853-1895), J. Dewey (1859-1952), P. Blonsky (1884-1941), A. Makarenko (1888-1939), L. Gandhi (1869-1948), Mao Tse-Tung (1893-1976) and J.K. Nyerere (1901-   ).

The fact that millions of children of school age are working(1) must be an important element in any consideration of the link between education and work. In some cases, these children have been more or less compelled to go to work, and should be relieved of their labours so that they can be given a general education. In other cases, as for example where family farm activities are involved, the children should at any rate be given an opportunity to combine educational experiences with their work in the fields, with the school helping to enhance and legitimize their family education and their parents' culture. In certain countries, at certain periods, children may be forced to engage in productive work in order to survive, while in other cases, participation by children in productive activity may mean that adults are thrown out of work.

17. Opposition

Experiments in productive work in schools are the outcome of political decisions. They are regarded as desirable and have been made necessary by economic development, technological change, and extension of the period of compulsory school attendance. Nevertheless, they have given rise to vigorous debate.

Teachers are inevitably affected by the conflicts in the productive systems of their countries, conflicts which they are not always in a position to understand fully. Having no long-term view and not having the benefit of any continuous training adapted to their concerns, many teachers are dubious about the effectiveness of such experiments, especially where production systems and service sectors are not prepared to accept students for systematic experiments in productive work.

They very frequently respond by calling for solid intellectual training, although, of course, such training is not necessarily divorced from the problems of the world of work.

Employers in both the private and public sectors, for their part, talk of the importance of efficiency and productivity, sometimes forgetting the educational advantages of bringing future producers into contact with the world of work.

In addition, firms tend to fear that they may be obliged to employ young trainees after their training period has been completed.

Workers' and teachers' unions which have frequently been faced with a fait accompli in the matter of reforms and educational practices, oppose these experiments, seeing them - sometimes rightly, sometimes wrongly - as an anticipatory form of occupational training, or even as the exploitation of minors.

Experiments in productive work sometimes encounter opposition from parents, who fear that they may cause their children to fall behind in the competition for degrees and the best jobs. More generally, however, such opposition is to be explained by the parents' own relationship to work, especially manual work.

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(1) Approximately 52 million under the age of 15 in 1979, according to Elias Mendelievich (Children at Work, ILO 1979), or possibly as many as 200 million; the latter approximation is more realistic.

18. The prospects for change

The implementation of continuing education policies, in so far as this implies better co-ordination between initial training and continuous training, would bring initial education closer to the world of work and would serve to transform the structures, content and methods of general education as well as the productive work programmes that had been introduced into initial training. Early occupational training is pointless if such training can be had throughout the individual's working life. On the other hand, it will then be necessary to enlarge the person's store of theoretical and practical knowledge in order to prepare him for productive activities, the development of which must be neither linear nor confined to a single area.

In some countries, there is a move to integrate apprenticeship into the educational system, and apprenticeship is beginning to be recognized as a perfectly valid way into the formal educational system. Since this integration of apprenticeship opens the way to the development of common activities for apprentices and schoolchildren, it may also enable the latter to acquire a greater insight into the world of work.

The introduction of productive work into the educational process is frequently associated with the concept of education that is functional in terms of economic and social development. Although the new approaches to the very concept of development are frequently contradictory, they have at any rate brought about reconsideration of a type of education (and productive work in school) which is both subordinate to the demands of production and divorced from the overall development and the social and cultural situation of a particular country. Certainly, any development which took all the necessary dimensions into account, including cultural, social, economic and scientific factors, would require the introduction of productive work into general education. However, this would have to be done in such a way that the innovation, where necessary, contributed to the enrichment of men, women and society in their various aspects.

The economic, technological, social and educational problems that have prompted the promotion of productive work in school call now for thorough educational reforms which are relevant to these new and highly complex prospects.

19. Problems to be solved

From this standpoint, the question that arises is, what possible strategies could be applied in order to integrate productive work into primary and secondary teaching programmes?

A look at experiments in education combined with productive work reveals that innovative educational strategies are not restricted to the education system but also affect the production system, and to a lesser extent the community and families as well. Signs of both opposition and acceptance appear in them all. How, then, can co-operation among them be organized?

How, and by what means, can relations between the production system, the education system and the social system be made more flexible and creative? The influence of education must not be allowed to dominate cultural creativity or production, and at the same time economic imperatives must not be allowed to render education and cultural creation empty of any meaningful content. How can the various partners concerned in these relationships exercise an influence on each other?

What arrangements should be contemplated and what resources should be committed in order to obtain better co-ordination and more effective co-operation among education and work, different government ministries, business firms or co-operatives, educational institutions, family, local community, associations, socio-cultural services, students and teachers?

How are the specific cultural features of students, parents and communities to be taken into account in the organization of productive work in school?

How are workers and the unions which represent them to be associated with the development of education through work?

The bodies affected by the introduction of productive activities into education are so varied that the existence of a wide range of different objectives, related to the main interests and responsibilities of each, is inevitable. In these circumstances, how are we to arrive at a consistent definition of the various economic, social, cultural and educational objectives which are the reason for introducing and promoting productive work in school, having regard to the interests of the production system, the students and teachers, the communities and the families?

Lastly, the promotion of productive work in school runs into a number of fundamental difficulties having to do mainly with the nature and selection of the activities which are to be integrated into the curriculum. These difficulties arise partly from economic limitations, such as monoculture in developing countries or the ageing and reorganization of a particular economic sector (e.g. coal mining), and partly from problems of infrastructure (inadequate facilities, lack of space, or inadequate industrial production sectors or socio-cultural services).

With regard to productive activities in secondary education, the question is whether the education system should accept only those (related to agriculture, crafts, industry, space planning, etc.) which are relevant to the environment in which the school is located, or whether it is desirable to try and diversify the range of productive experimentation through scholarships, production units set up outside the school context, laboratories, simulation exercises, and audio-visual techniques and the like, in order to stimulate the development of creative imagination.

VI. Impact of these developments on the planning, organization and operation of education systems (school context and structures, content, methods, teaching staff)

20. The integration of productive work with school activities has led to various changes in education systems.

With regard to structures and the school context, the following effects have been observed:

(a) diversification of the institutions responsible for educational activities;

(b) alteration of the school year with a view to making the holiday period coincide with the periods of most intense agricultural or stock-raising activities in some countries; in other countries, subdivision of monolithic school time into compulsory school time, creative school time and free school time;

(c) dispersal and/or relocation of educational spaces;

(d) recognition of productive work as a form of educational subject-matter.

Some experiments, however, have revealed the persistence of features inherited from "traditional" education systems and new forms of opposition:

(a) coexistence of two still clearly distinguishable streams (technical and vocational as opposed to general), with productive work activities playing an insignificant role in schools providing general education;

(b) continuing difficulties of communication between the education system and the production system;

(c) difficulty in evaluating productive activities undertaken outside the school context;

(d) definite reluctance (in some countries) on the part of the school to assume responsibility for students during productive activities undertaken outside the school.

21. Furthermore, experiments in the integration of productive work with school activities vary considerably in content (both in theory and in practice). In many countries there is an increasing tendency to prefer an orientation towards problems and conditions that are characteristic of the material and social environment of the work in question. More generally, there is a trend in favour of meeting the immediate needs of individuals and communities (food production, infrastructure development both inside the school context and outside it, improvements in health and sanitation conditions, instruction and training for local inhabitants, and so on) or in favour of working to achieve the objectives of local or national planning.

It does appear that in this new situation, with productive work being integrated with educational activities, differentiated choices of educational and productive activites are being made in order to promote creation and cultural production and to help provide an introduction to the general culture of the world of work in its technological, social, health-related, economic, associative and other aspects. Another purpose is to enlarge the various kinds of subject-matter, steering them towards the provision of socio-cultural activities for the local and national communities (e.g. the organization of performances, festivals, games, youth movements and so on). In many instances, however, the task of planning, working out and introducing curriculum content has raised a number of problems, especially with respect to the following:

(a) co-ordinating the progression of theoretical learning with that of practical learning;

(b) adaptation of productive work to students in different age-groups;

(c) compulsory or optional nature of the productive work;

(d) means of avoiding boredom among students.

22. The principle of introducing productive work into the curriculum creates a new form of learning whereby the teacher ceases to be a mere transmitter of a "fund" of knowledge of which he is the sole guardian. Under the new system, he and his students work together to develop projects based on their knowledge of the environment, on practical experiments carried out by the students in factories, farms, families, community organizations or scientific research units, and finally on knowledge acquired by these students outside the school system via television, their families, on the playing field, etc. In addition, the students' practical activities in workshops, laboratories, fields or production units are no longer seen as "incidental" and of little concern to the school, but are thought of rather as "essential" activities which have become necessary to the

development of a learning process centred on the solving of practical problems. In educational experiments involving the integration of productive work, the teacher-student relationship ceases to be the main factor, and problem-solving and the carrying out of given tasks become the major aspects of the educational process.

Forms of actual productive work and/or simulation have been tried along the lines of these experiments in some countries. However, the basic question still to be answered is, to what extent is it necessary and useful to extend simulation experiments, and by what means? Of these two forms of the integration of work with education, which is preferable (in cases where a choice is available)?

Here we encounter the problem of evaluation. In these various experiments, should manual and intellectual activities be equally weighted? Is there another knowledge evaluation system? Some experiments enable us to answer these questions in the affirmative, especially in countries in which the examination system has been reformed to take productive work in the curricula into account. The following approaches are particularly noteworthy:

evaluation of manual activities as an integral part of general education;

participation by non-teaching educators in the work of evaluating not only students' knowledge and ability, but also the even more important matter of the relevance and completeness of experiments involving the integration of productive work with education.

In such a context, the admission of students depends on more than knowledge in the academic sense, and takes into account their practical activities as well - their "practical intelligence", so to speak. The acquisition of skills is subject to other evaluation criteria. Various components of the educational process, for example, may be offered an opportunity to evaluate productive activities at the school and to assess students' abilities in the areas of management, marketing and product storage. Productive work is considered both as a means of self-guidance and as the context in which self-guidance takes place.

In this process of introducing productive work into the curriculum, however, in what way and at what stage does the problem of academic and careers guidance arise? What new function is assigned to such guidance? Should productive work experiments become factors in selection or guidance, or should they not?

23. The main problem that arises in connection with this new educational situation, however, and one which appears in different guises depending on the country concerned, is the question of the educators, both teaching and non-teaching, and their participation in the new learning process. The introduction of productive work activities into the curriculum may offer opportunities for providing education away from a central point, while also affording an opportunity for the reorganization of school time, although, of course, practical and educational requirements and the availability of educators must be taken into account. Furthermore, productive work appears to open the way to the integration of, and voluntary participation by, parents as educators and producers. The question therefore arises: with what resources and in terms of what criteria is it most advisable to undertake the recruitment and training of the various agents responsible for these activities, including both teaching and non-teaching educators?

To what extent is it possible to differentiate between the various categories of educators as regards the way they are used and the role they play? Can and should teachers and non-teachers participate jointly in the planning, development, implementation and evaluation of curricula under the new conditions of education through productive work?

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INTERNATIONAL MEETING OF EXPERTS ON THE PROMOTION OF PRODUCTIVE WORK IN EDUCATION

Unesco House, Paris
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SOME POINTS FOR REFLECTION PROPOSED BY THE PARTICIPANTS

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CHAPTER I

Unity of technological and social aspects of work in elementary and secondary education

The function and effects of including productive work in the educational process can hardly be considered separately from the nature, programme and composition of the educational system in general - from its conception, organization and functioning. In general terms, this applied both to the educational system at large, and to elementary and secondary education, more especially when considering productive work as a factor in general education. It is therefore methodologically more appropriate to begin by pointing out the basic principles and essential characteristics of the educational system in each Member State, namely those which primarily determine the character and programme of the educational process, and therefore also the paths, means, forms and methods of its realization.

The character and basic principles underlying the educational system substantially determine and express the position and function of productive work in the educational process, that is, the objectives, tasks and values that are to be achieved through it. Otherwise, production work appears as a supplement to the educational process, as a kind of compensation for the absence of the aspects of work in this process (a way to curb the overstated orientation towards intellectualism and verbalism), and as a sphere of practical activity in which the pupils can see how their theoretically acquired knowledge can be applied.

However, it is possible in certain educational systems to introduce productive work into the educational process as a catalyst to bring about radical changes that are in character systematic, organizational, programmatic and technological, in other words, to identify the changes necessary in regard to the conception, organization and functioning of the educational system by a strong commitment to productive work - as a factor in education and in the comprehensive development of the personality. Which methodology will be applied in the introduction of productive work into the educational process depends on numerous national and local circumstances, ranging from the ideological-political and economic to the cultural-historical, geographical, technical-technological and others.

The character and content of productive work, the position and role of pupils in it, the forms and methods of the pupils' participation in this work, and the effects it achieves, depend on the objectives set for the educational process through productive work. At the same time, it is necessary to bear in mind the inter-dependence of education and productive work - in other words, of the process of teaching and productive work, since the process of production is actually also a complex educational process, a source of knowledge and a factor for developing the pupils' system of values. Therefore, we should always keep in mind: (a) the educational value of productive work, and (b) the value of education for production. However, a unilateral approach to these aspects and effects of the inter-relation of education and productive work should be carefully avoided. The educational value of productive work lies not only in the acquisition of knowledge and development of practical habits and skills, but also in the system of values formed by young people in the process of productive work (the social aspect of work and human relationships in the process of work, and more broadly in society, in regard to the conditions and results of work), and which at times differs greatly from the system of values formed only in closed environments, in schools - that is, in conditions in which situations from actual life and work as well as relationships among people are feigned and simulated, Likewise, the production value of education for production (the economic effects of education) does not consist only in preparing young people to become highly productive producers, but also in forming and developing active personalities which will be capable, both in the socio-economic and ideological-political sense and through free association with others, of struggling for such relations and working and living conditions as will gradually eliminate every form of mediation between man and the conditions and results of his work and the work of society as a whole.

We have already pointed out that the real value and role of productive work in the educational process can be conceived and achieved if the entire educational system is designed and directed towards education for work and through work. In the educational reform in Yugoslavia which we initiated in 1974, we started from the presumption that work is an irreplaceable part of the educational process. We have accordingly committed ourselves to such a system of education in which a firm linkage and unity of the process of education (teaching) and productive work is realized. Polytechnical education and preparation for work, the core of which is pupils' participation in productive work, permeates the entire system and process of education and represents the main characteristic and one of the basic principles of socialist self-management education.

After the elementary eight-year general education school, we have introduced into our educational system two-year uniform programmes of a general character, so that every pupil, before choosing a profession, has to complete the ten-year general education curriculum which contains elements of work, technology and production. In our educational system, after the elementary eight-year school, not a single school or form of education prepares the pupil solely for university studies, but rather, at each level, and in every form of education, knowledge is acquired and capabilities developed for joining the process of work as well as for the unhindered contination of education. We have therefore abolished dualism at the secondary level of education, since in the previous system, there were schools which prepared their pupils primarily for university education (the gymnasium) and schools which prepared pupils for work (vocational schools). At present, after the two-year general education programmes at the secondary level, the pupils choose programmes which train and prepare them for taking up work in an appropriate profession, and later on, to continue through the forms of in-service or recurrent education their learning, and acquire higher levels of qualification. In all these stages of education, productive work and social practice are components of the educational process, not only for the purposes of the profession (technical and technological aspect) but also as a reliable means of preparing young people socially and economically for their social and political functions. We have in mind the study of real social processes and relations in production and in life in general but not through books and brochures or lectures delivered by teachers, but rather through the direct participation of pupils and students in practice, that is, in production.

During the eight-year elementary education course and the two-year general part of secondary education, pupils learn general initial professional skills and acquire the requisite habits, besides mastering the scientific and technological bases of modern production - its technique, technology, organization and efficiency, and an understanding of the socialist self-management socio-economic relations in which production and work are effected in general. We are dealing with polytechnical education, and preparation for work based on the firm linkage and unity of education and production work, as a component of contemporary general education. The productive work of the pupils appears here as one of the ways of achieving the objectives and programmes of polytechnical education and preparation for work.

The initial general professional skills and habits and the overall technological and social basis of production, developed within the system of polytechnical education and preparation for work, include:

- application of basic natural and social laws in production and the life of man;

- promotion of understanding of the role of up-to-date technology in the life and work of individuals and in society as a whole, and learning about the basic principles of various technological processes;

- acquisition of knowledge, understanding and awareness of the need for the protection of the human working and living environment;

- learning about major organizational economic and technical-technological principles underlying the process of industrial production and about workers' operations therein;

- development of the aptitude for technical representation, supervision and control over the work of others, as well as self-control;

- development of skills and abilities as elements of the technological culture and the culture of work, and adaptation to the contemporary organization of the system; of accuracy and a methodical approach to work, together with rational usage of materials, time and means of production;

- introduction to typical (representative) processes of production through a rational use of means of production as well as monitoring and identification of trends in the development of engineering, technology and production processes in general;

- adoption of technical and technological terminology ("the language of technology") and making use of means of technical correspondence (drawings, schemes, symbols, documentation, etc.);

- development of skills and habits in handling and applying simple tools, machines and other means of work and production;

- understanding and adoption of laws (up to the level of application) underlying technologies of production, combined with learning about the functioning of individual means of production and about the regimes of utilization of machines, particularly bearing in mind the factors affecting quality and efficiency;

- development of aptitude for the aesthetics of industrial design;

- development of a positive attitude and strong commitment to the work in general and, especially, to the productive work, and development of readiness and willingness to participate actively in work and production;

- acquaintance with the social aspect of production and with relations among workers in production;

- acquaintance with the characteristics of basic production and other activities in the society and development of the aptitude for choosing the most appropriate type of occupation;

- learning about basic principles of behaviour in traffic and of how to handle (i.e. drive) simple means of transport.

The above-mentioned initial general professional skills and habits and the overall scientific, technological and social basis for work in production are developed: (a) through the process of education as a whole (through all subjects and all forms of educational work) and, in particular, by way of physics, chemistry, biology and mathematics; (b) within a special subject entitled "The Bases of Technology and Production" (now changes in the title and even in the content are being proposed, so that in some republics, this subject will be called "The Technological and Social Bases of Work"); (c) by way of participation by pupils in production and other forms of socially useful work; (d) through optional subjects and curricula; (e) through participation by pupils in out-of-school and free time technical, technological-productive and working activities.

In the following text we shall dwell only on the special subject mentioned above, and on the practical training of pupils.

For the purpose of teaching the special subject known as "The Bases of Technology and Production" (in some republics "The Technological and Social Bases of Work") the curricula for elementary schools and for the first two years of secondary schooling envisage separate classes: in the first four years of primary school - 1-2 classes per week; in the next four years of primary school - 2 classes per week, and in the first two years of secondary school - 4-7 classes per week. In addition, during the first four years in primary school, pupils are obliged to devote another 35 class-hours a year to various forms of socially useful work; during the next four years of elementary education, pupils are obliged to devote 70 class-hours a year to the productive work; while pupils in the 1st and 2nd forms of secondary school engage in productive work under the subject "The Bases of Technology and Production" (in some republics the number of classes amounts to 4 + 3). The programme of the subject, "The Bases of Technology and Production", is carried out through classroom teaching, the work in laboratories, school workshops, school gardens and farming lots as well as through work in industrial plants, on socially-owned agricultural estates, on building sites, in scientific and research institutions, etc.

There are various patterns for the timing of the scheduled number of classes allocated for the practical training of pupils, eg.: 5 class-hours in one day (one day a week), 18 class-hours in a month (3 days with 6 class-hours each), 45 classes in three months (7 days with 6,5 class-hours each). The work of pupils in production is pedagogically programmed, on the basis of examples - in a certain branch of activity, those operations and jobs are selected which are representative of contemporary production from the point of view of mechanization, electrification, the introduction of chemistry into the processes of production and of work in general. Although practical training implies concrete jobs, the immediate objective is not to qualify a pupil for such and such a particular job, but to enable him to understand and experience the technological, economic and productive aspects of the process of production, the activities of workers and their role in the whole context of social reproduction. In the pedagogically organized production work, i.e. practical training, pupils witness the integration of science and technology in the process of production. Emphasis therefore is laid on the scientific and technological principles of production used in the industrial manner. In the selection of typical jobs, it should be borne in mind that, from the point of view of preparation for work and polytechnical education, it is necessary for pupils to understand and adopt general principles in different processes of production with various machines and mechanisms, and not to learn how to work on one machine or to master one reproductive operation. In selecting plants, production jobs and forms of pupils' participation, we are guided by the following principles and requirements: (a) existence of production and technological material which is related to the teaching of natural sciences and mathematics; (b) existence of typical production operations, common for a number of enterprises; (c) existence of additional jobs or the possibility of a better arrangement of workers in shifts; (d) use of technological equipment which corresponds to the age and the level of maturity of pupils; (e) access to technological processes and production operations; (f) inclusion of pupils in the system of health and technological safety measures, and existence of the necessary conditions of health and hygiene.

After identifying an enterprise in which pupils are to work, a pedagogical and technological analysis of the enterprise is made for the purpose of finding jobs for pupils. Additionally, the pedagogical and technological analysis provides information to all members of the teaching staff about the major characteristics of the enterprise in which pupils are going to work. The pedagogical and technological analysis is prepared by a joint commission composed of teachers and experts from the production, and is put at the disposal of every member of the staff. These indicators are of special importance for teachers who teach "The Basis of Technology and Production", for coordinators of production work and productive training, and for teachers of natural sciences and mathematics. For job analyses, corresponding questionnaires are used, into which data are entered on: technology, conditions of work, mental and physical operations as well as other data necessary for evaluating the adequacy of a job for pupils' training. After the analysis is prepared, jobs are selected with due regard for the objectives to be achieved through the practical training of pupils.

After the necessary preparations in both schools and in enterprises, implementation of the programme of pupils' practical training commences. On his job, a pupil is treated as a worker, he is provided with safety clothes and has the right to short breaks during working hours. As regards the tasks they have to perform, pupils receive instruction from their teachers (coordinators for practical training) in the form of preparation, on an individual basis, as well as from the workers themselves. In the course of practical training, pupils move from one job to another within units and plants and after a specifically determined period of time, they go to another plant. The schedule of rotation and the time to be spent in various units and plants depend on the duration of practical training, the number of units in the factory, and the nature of the technological production process. The teacher, i.e. coordinator for practical training, in cooperation with the heads of units and plants, prepares schedules, on the basis of which pupils go from one unit or plant to another.

For the purpose of following the activities of pupils engaged in production, corresponding files are kept, but within reasonable limits, because too much administration weighs upon the day-to-day activities of pupils, teachers and workers in production. We have in mind the records kept by teachers in charge of the practical training of pupils, the records of the enterprises in which pupils work, and the records kept by pupils themselves. In addition to records on their production work, which pupils keep on a regular basis, (description of the actual job - operations, description of means of production - tools, measuring instruments, etc. drawings of products and means of work, characteristics of materials used - processing and consumption features, etc.) at the end of the practical training each pupil, on his own, prepares a report on the process of production he has studied. It is in the course of the practical training that each pupil chooses one of a number of suggested topics in connection with the process of production, which he writes up after his practical training is over. The complete files also serve for final evaluation of the pupils' work in production, for which, in our schools, a comprehensive methodology exists.

Note: We have dealt here with work in production as an element of the general education of pupils in elementary schools and in the first stage of secondary education. During the discussion about specific aspects of the major theme of the meeting of experts, the author will provide further information and present some ideas on the possibilities of promoting the theory and practice of integrating pupils into the process of production in enterprises. If necessary, the experience related to making use of pupils' practical training in the professional stage of their education will also be presented. In Yugoslavia, larger-scale research projects have been carried out on the socio-economic and pedagogical aspects and effects of the integration of pupils into the production work of enterprises, the results of which will also be discussed at the meeting of experts in Paris.

CHAPTER II

Notes on education and productive work

In this short paper, I am going to make a single point: the nature of productive work associated with schooling cannot be separated from the nature of work in the society as a whole. In other words, the kind of productive work developed as part of an educational system will reflect the relations in production in work. This idea can be taken further: if attempts are made to adopt education/work schemes from other political/social contexts, they will be altered to fit the dominant relations existing in the adopting society.

Let me begin with some concrete examples. In the United States, it is normal for youth to work while in high school and even more usual for university students to hold part-time jobs. This is not an organized work-study programme, but it nevertheless represents a generalized productive work-schooling concept that has characterized American education for many generations. It is definitely a model of work/education, so much so that James Coleman in a 1973 report of a Presidential Commission on Youth (Coleman, et al. 1973) argues that an early work programme should be formalized so that youth would be better prepared to enter permanent jobs after schooling.

What is the nature of the work that American students undertake? First, they must find jobs in the competitive market place: i.e., they must compete with adults for work. While more inexperienced than adults, they are willing to work for lower wages and are usually willing to take more menial, less permanent jobs. They are therefore at the bottom of the job hierarchy, so, secondly, they are generally given little responsibility. Third, they are taught to compete with fellow workers - to work harder and follow the rules - in order to keep the job. They learn to take orders, to listen to the boss, to perform without complaints. They learn about searching for jobs and getting fired. All in all, the work experience of students is a first immersion in the competitive capitalist labour market (very few young people get part-time jobs in monopoly corporations or the public sector). There is one more feature of student work in preview: it is "voluntary." Therefore, those students who come from high-income families work, if at all, not out of need but to gain some "experience in the real world." Lower income students work out of necessity. Often, jobs of the higher income students (especially those in university) reflect their parents' connections in the jobs market, or the possibilities of the universities they attend to place them in more interesting, career-oriented jobs. So the kind of job experience students get depends in large part on social class.

It is common, then, for the American student to engage in productive work while in school. It is also common for such work to be menial even though once the student finishes university, the kind of job he or she gets will be more intellectually oriented. In theory, this should reduce the social division between manual and mental work. To some extent it does. Americans from higher social classes are less averse to engaging in manual work than their counterparts in lower income capitalist countries (where manual work is a sign of low status). On the other hand, the menial jobs that higher class young Americans engage in as students are seen (correctly) as a temporary social position. American capitalist society still defines manual work as the bottom of the social hierarchy, even while there are also divisions between kinds of manual work. The temporary nature of manual work for higher class youth allows them to engage in it without identifying with the manual working class. Indeed, those youth who become managers and capitalists and who worked in manual jobs when in school can use that social experience as a rationale that they are no different from their working class counterparts except in their motivation and cleverness. Rather than unifying manual and mental work, the same early experience for working class and higher social class youth rationalizes their permanent separation, even justifies the later power relations between the two groups.

Now let us turn to a totally different example: Cuba, Since 1961, the Cubans have implemented a series of productive work programmes alongside their educational system. These programmes have first sent secondary school students into the countryside for 45 days in the summer (primarily to harvest sugar) and then had students working in agricultural projects attached to schools in the countryside as part of their regular school curriculum (see M. Carnoy and J. Werthein, Cuba: Desarrollo Economico y Reforma Educativa, 1955-78 (Mexico: Nuevo Imagen, 1980)). Students in Cuban universities also work, but in enterprises and in jobs associated with their career studies. And schools for adults (in the 1960s when most adults had not completed primary schooling) were located near enterprises and collective farms, so that adults could attend classes directly after work.

Thus, in Cuba, there is an intimate connection between formal education and productive work. Unlike the United States, the connection is not voluntary: students must work as part of their schooling. They are even evaluated in part on the basis of their work attitudes, and these evaluations determine whether they will continue on to higher levels of schooling. Furthermore, every student works, regardless of parents' means. If in urban secondary schools, they participate in the schools to the countryside (45 days in summer agricultural work); if in rural primary schools, they work two half-days per week in school gardens; if in rural secondary schools, they work twenty hours per week in the fields surrounding the schools; if in the select vocational high schools (Lenin Vocational School), they work in factory production related to the school (in the provincial vocational schools, students do primarily agricultural work).

The purpose of student productive work in Cuba is multifold: 1) Principally, work while studying is an effort to inculcate youth with respect and understanding for manual work - an attempt to break down the separation between manual and mental work. Working itself is, however, accompanied by a great deal of ideological instruction which illuminates this point. It is made clear to students that they are not working just to work, but to understand the meaning and importance of manual work in a collective society. 2) The schools to the countryside and particularly the schools in the countryside are part of an effort to break down the barriers between rural and urban life. Students from urban families learn about agricultural work and life in rural areas. Originally, all secondary school pupils (except those selected for vocational schools) were intended to attend schools in the countryside, but such an extensive programme has been abandoned in the last few years, even though schools in the countryside are still being built, especially at the higher secondary level. 3) Students' work was intended to provide real output to contribute to the Cuban economy. This production would help pay for the current cost of the schools in the countryside and the vocational schools. At one time it was thought that school-related agricultural production would be great enough to pay for schooling. It has become clear, however, that this is not the case, and this explains why the schools in the countryside programme has been slowed down. 4) Work is designed to teach students about collective work and socialist competition. Students work in brigades: the head of brigade is elected by the students and the brigades are student run. Teachers are also supposed to work in the brigades (as members) but in reality, they work with the students only one day per week. In any case, brigade leaders can criticize teachers' work performance in the brigades. Collective responsibility and the concept that work is carried out for goals which go far beyond the individual are stressed throughout the secondary years of schooling.

The difference between this kind of education-work association and that which occurs in the U.S. are clear enough. In the U.S. individual need and competition are the basis of student work. The work experience reinforces the hierarchical relations existing in production because students work right in enterprises and work at the lowest rung in the hierarchy. Not everyone works, but generally lower class students are not only more likely to have to work, but end up doing less desirable jobs when they are working. In Cuba, work is collective and everyone has to do it. Students participate in work programmes that are especially organized for them and those programmes are designed to inculcate values and norms for an idealized socialist society. Thus, student work aims to socialize students not necessarily into reality but into what Cuban leaders would like the society to be. School-work therefore plays a vanguard role in leading Cuban youth toward a socialist Cuba.

Of course, these differences are not accidental. Cuba and the United States are different societies with different organizations of production and different ideologies. But that is precisely the point of this paper: the notion and implementation of productive work programmes associated with educational systems will be intimately related to the overall organization of production in the society and the ideology of work and education. The relations of production in the society will tell us what the purpose and form of productive work programmes for students will be.

On the other hand, we also have to recognize that there are possibilities for contradictions and struggles in the educational system - contradictions and struggles that can lead to work-study programmes which do not correspond to the generalized relations of production in a society. For example, Paolo Freire's literacy training in Brazil was adult education related to work situations which attempted to raise consciousness among peasants of the work system itself. Union-run schools in Sweden, England, and Italy develop skills and socialization for workers which run counter to the capitalist relations of production dominant in those societies. Some university work-study programmes in the United States, although they do not generally have an alternative society in mind, tend to socialize children in a way disfunctional for corporate society.

The great difficulty of combining work and education in ways which do not reflect the existing relations in production is that the work experiences of students would have to run against the grain of productive work as seen by the society as a whole. In some places this is possible, particularly where there are alternative structures of work (such as cooperatives or worker run and owned enterprises) into which students can enter. In the United States, for example (or in Europe), it would be possible to combine work-study programmes in some communities with existing cooperative enterprises. But this would be running counter to work relations in the society as a whole. In Cuba, where the State completely organizes student work, it is unlikely that students would be able to have job experiences in capitalist enterprises, such as private farms (unless they were born on such a farm).

Similarly, the transfer of productive work programmes from one social formation to another would be difficult. The Cuban school in the countryside, for example, would be a different programme in a capitalist Latin American country, where rural areas are exploited for the enhancement of urban development and rural work is considered of much lower status (and receives much lower pay) than work in an urban factory. Even more important, the ideological basis of the Cuban effort would be completely missing. Again, overall relations determine the nature of the productive work experience for students. It is only as part of a struggle against those dominant relations that alternative programmes can be implemented.

Max FIGUEROA

CHAPTER III

Basic ideas on education and productive work

1. Ever since the new society was established in 1959, productive work in Cuba has had a new value set on it. The social transformation process, and the example set by the leaders, have been a major influence in teaching the public to appreciate the dignity of work, without distinction between physical or manual labour and intellectual work.

2. This change in social awareness derives basically from the objective historical fact that, with the radical changes in the country's economic and social structure, work and production are no longer a form of alienation, but have been transformed into activities which have been set free from any kind of alien exploitation.

3. Over the last 21 years, the Cuban national education system has contributed towards revolutionizing society in respect of the role played by productive or socially useful work by developing a programme for the complete training of the personality of the new generation of Cubans.

4. In Cuba, as in other socialist countries, this type of complete training has one aim - the conscious incorporation of the new generations in the construction of the new society, and to this end, the objective components of this complete training have been set out as follows: political and ideological education; intellectual, scientific and technological education; physical, moral and aesthetic education; patriotism with an international outlook; and practical polytechnic education.

5. The view is accordingly held that education or complete training of the individual are not possible without education through work and for work. Philosophical, scientific and historical considerations both support this approach.

6. Each contemporary society is inevitably obliged to consider two fundamental questions in regard to the education of the human being:

   - what kind of individual and what kind of citizen does it aim to produce?

   - in what skills or professions should people be trained?

   In both cases it is necessary to seek ways of education through work and for work. Societies in which work, as an activity necessary to the individual and to the society, continues to be alienating, come up against an acute contradiction, and they therefore seek temporary expedients.

7. Application of the principle of combining study and education with productive or socially useful work in the education system is consistent with all the other aspects of a complete training, namely intellectual, physical, aesthetic, scientific and technological education, patriotisms with an international outlook and, in particular, with the ideological, political and moral education of the new generation.

8. The application of this principle in the teaching process affects not only the objectives, contents and methods, of education but also the entire organizational structure of the educational system, including general, technical and vocational education, teacher-training and higher education.

9. The methods currently employed to apply this principle in Cuba are as follows:

General education - 12 grades

Primary (from 6 to 12 years, six grades)

- socially useful work in gardens belonging to the school or located nearby
- productive work in school fruit or vegetable gardens
- work on plots belonging to the Ministry of Agriculture
- for some schools, work in large-scale collective fruit or vegetable gardens, under the supervision of the Ministry of Agriculture.

In primary education appropriate methods for applying this principle have not yet been fully worked out.

Basic secondary education in towns (day schools), 7th, 8th and 9th grades.

A large-scale scheme "The school in the countryside" was introduced in 1967: more than 400,000 pupils (12-14 years old) go to live in camps set up by national agricultural enterprises and work on the land for a period of 42 days.

Basic secondary education in the countryside (12-15 years), 7th, 8th and 9th grades, for boarders, a system generally introduced in the 1970s. These are the schools of some 600 pupils, half boys and half girls, situated in agricultural and industrial development areas. The pupils work on the land every day for three hours, from Monday to Friday, that is to say 15 hours of work a week. Half the school does productive work in the morning while the other half has lessons, with the process being reversed in the afternoon.

As these schools are in State development areas, they are all near each other and linked by roads, and they serve as cultural focal points for the rural communities in the new villages growing up in these areas. The number of pupils at present attending these schools exceeds 250,000.

Pre-university institutes in towns (day students) 10th, 11th and 12th grades, from 15 to 18 years. The scheme "The school in the countryside": more than 52,000 students.

Pre-university institutes in the country 10th, 11th and 12th grades, boarding. The scheme "The school in the countryside": some 83,000 students.

In other branches of education, namely intermediate technical and vocational education (skilled workers and intermediate technicians). primary school teacher-training, and the training of higher-level specialists, the principle is applied through practical production activities, vocational activities or research linked to the curricula.

10. In general education, application of the principle of combining study with work means that education takes on a polytechnic and prevocational nature; in other words, pupils are not trained for a specific occupation (a single technique) but for the whole range of modern vocations.

This means that as regards content (syllabuses, curricula, textbooks), the essential theme of the various subjects (theoretical, practical, etc.) is linked to the main sociological problems of the main aspects bound up with national production and the provision of social services. In addition, the curriculum includes subjects from the "polytechnic support cycle": "practical education" (workshops); "technical drawing" and "bases of modern production".

Lastly, through productive work for students Cuba is trying to achieve two objectives:

The first, educational: the development of abilities, attitudes, convictions, knowledge, habits, and skills which are of great value to the individual and to society;

The second, a conscious contribution by youth to the economic, social and cultural development of the nation.

CHAPTER IV

Combination of productive labour with education in China

The general aim of education in China is to enable everyone who receives an education to develop morally, intellectually and physically and to become a worker with socialist consciousness and scientific knowledge. One of the main avenues of approach to this goal is to combine productive labour with education, i.e. to regard productive labour as an integrated part of the educational process. From the very beginning of our revolutionary movement, we have emphasized the importance of productive labour in education.

When our whole country was liberated in 1949, most of the old intellectuals despised manual labour and took the view that those who use their minds should dominate those using their hands. Therefore, after the establishment of the People's Republic of China, intellectuals were called upon to integrate themselves with workers and peasants. Then in primary school, we required the children to take a certain part in labour to develop their thought and feeling of loving labour and the working class at an earlier time. In the lower grades, we did not include productive labour as a regular subject in the curriculum, but we insisted that the children should be able to take care of their own daily affairs, to keep their environment clean and to join in some simple house work. In the higher grades, pupils had to spend two weeks a year in productive labour, such as joining the peasants in a busy harvest period, planting in the school garden, or doing some simple work in a factory.

At the secondary education level, the objectives of students' participating in productive labour are to ensure that they do not despise physical work and working people; to develop the students' liking for labour and tendences to learn from the workers and peasants; and to foster the disposition to combine what they have learned in the classroom and their direct experience of labour.

It is stressed that the students should be educated to master scientific knowledge and technological skills in the process of participating in productive labour, on the one hand, and to relate the teaching content in the textbooks closely to the new achievements in modern industry and agriculture, on the other hand. Students should be induced to do more experimental work and encouraged to participate in technical reforms while their interest in exploring the natural and social world should also be fostered. In a word, the secondary schools, in their implementation of the principle of coordinating productive labour with education, should turn out students either well-qualified to enter universities, or equipped to occupy a job after their graduation.

As we have considered productive labour as a part of the educational process, the teaching content has undergone some modifications. In addition to the more usual subjects, productive labour is included in the curriculum as a regular subject. In biology, when the teacher explains the structure and the functions of different parts of a living organism, or interprets the law of heredity and variation, he has to teach the students how to apply the scientific theories to coop-planting, feeding domestic animals and selecting good seeds. In extracurricular activities, the students often go to the field to measure the growth rates of buds in different kinds of new seeds and observe their variations after they have been fertilized. In chemistry, the students should be able to distinguish acid soil from alkaline soil and to test the different results of chemical fertilizer used in the field. As to mathematics, some elementary knowledge on calculus, probability theory and logical algebra has been added to the teaching content in order to adapt to the demands of contemporary sciences and technology. In learning physics, the students are required to apply what they have learned about physical laws to the solving of production problems, such as installing simple transistor-radio and some kinds of electrical instruments.

The teaching methods have also undergone some corresponding changes.

1) When the teaching content the teacher is going to explain to the student is similar to the content of the productive labour in a local factory or farm, the teacher may bring his students to the workshop or to the field. While the teacher is explaining a scientific principle, the students can join the workers or peasants so as to practice what they learn from the teacher. This method can deepen the students' understanding of the teaching content and arouse their interest in exploring the world of nature.

2) If what the students learn in the classroom is applicable to actual situations, the teacher should encourage them to make use of their theory to solve practical problems in their daily life. The students will thus be able to test the validity of the scientific theories and this will develop their willingness to accept productive jobs in the future.

3) Besides working in their own laboratory, teachers may furthermore bring the students to the factory as a laboratory to carry out some experiments. This can enrich what they learn from the textbook and give them a chance to develop their experimental spirit.

4) When a teacher prepares to give a lecture on a certain subject, he may choose some actual cases in his local district to illustrate the teaching content. For instance, when he explains the advantages of close planting, he can introduce the new way of close planting used by neighbouring cooperatives and show the rich harvest they have obtained.

5) Finally, the students are encouraged to do some social work for public welfare, so that they can develop their collectivist spirit and willingness to help others.

In differing social contexts, we have adopted various ways of combining productive labour with education.

1) The school may set up its own factory or farm. There are two types: (a) The school-run factory produces its own goods and sells its products directly in the market; and (b) It produces only certain machine parts for another big factory.

2) The school and the factory cooperate with each other in two ways: the factory sets up a satellite workshop in the school, where the students take part in labour; or the school sends students to the factory for a certain time where they follow a master worker to learn the productive process.

3) In urban areas, several schools may cooperate to establish a common factory. The government usually gives it financial aid. The factory is often used as a place for trying out new inventions by the students.

4) In the villages, secondary schools generally have their own experimental farms and introduce scientific ways of planting, learnt from textbooks, to the people's communes.

Since it is a new thing to introduce productive labour into general education the teachers have to be re-trained. First of all, teachers are required to go to factories and farms for a certain period to learn from the workers and peasants and to form the habit of joining in productive labour and gradually to develop the ability to apply scientific theories to industrial or agricultural production. They have to attempt to integrate theory with practice. In preparing their lessons, they gradually endeavour to pay attention to new scientific developments and technological innovations so that they may enrich the content of their teaching.

A new kind of part-time school (we call it "half-work and half-study school") represents a new way of combining productive labour with education. In such a secondary school, the students spend half of their time in studying and half of their time in labour. These young men are both students and workers or peasants. They receive general, fundamental education with a few selected vocational courses.

In most cities, we have recently opened many vocational schools and some vocational courses in ordinary secondary schools, in which the students will acquire some vocational knowledge. In such schools, productive labour and education are more closely coordinated, because we expect our students to be well-prepared to occupy a suitable job, if they cannot enter universities.

We have been trying to apply the principle of combining productive labour with education for only a short time, yet we have already found many merits in it. We have in fact begun to achieve our educational aim of developing our younger generation morally, intellectually and physically. On the purely teaching side, we have enriched content, modified our teaching methods and trained our students to unite theory and practice; psychologically, our students have developed a liking for labour and respect for the working class; they are able to use both their minds and hands, marking the beginning of the narrowing of the gap between manual and mental work; they have also developed the collectivist spirit and willingness to help others. In practice, they are always ready to repair their class buildings, to clean the surrounding ground and to design the school garden and the campus.

Although we now have some experience in the application of this principle and have felt its beneficial impact on the organization and functioning of our educational system, there are still many problems to be solved and we have much work to do. We hope that, at this conference, we shall learn a lot from countries which are our friends.

CHAPTER V

The interaction between education and productive work: the Beninese experience

Different aspects of the integration of education and productive work

1 - Historical Background

In the early 1970s, many newly independent African countries saw the reform of their education systems as one of the basic prerequisites for successful development and for freedom from the cultural and social alienation imposed by colonization. Between 1961 and 1976, a whole series of international meetings were held to consider the objectives of education in this new context. From these meetings, the idea emerged of promoting productive work as an essential characteristic of education, and different ways of applying this innovation were devised.

The final impetus was given at the conference of African Ministers of Education, held in Lagos in 1976, which laid down the following principle in paragraph 10 of the report of its first Commission:

"Work is an essential component of development, and the African of the future must be a worker, a producer. These concepts were downgraded in the imported school and the new school must reinstate them in a place of honour. The incorporation of manual work into education therefore has an educational significance, as it is by producing that a pupil learns to be a producer within a community itself committed to the effort of production". The second international conference on education in Africa, held in Brazzaville in 1978 under the aegis of the African Bureau of Educational Sciences (BASE), and the regional seminar organized by the NEIDA in October 1979 at Porto-Novo (Benin), gave various African countries the opportunity of discussing their experiences and examining the different approaches with a view to defining the relevant concepts more clearly and proposing strategies likely to promote a successful and harmonious link between education and productive work.

2 - The Conceptual Context

1) Education implies the imparting of knowledge, intellectual capabilities, manual skills and techniques, and a positive outlook and moral attitude, with a view to providing the means of acquiring a true understanding of one's environment and of contributing towards its transformation. To a certain extent and within a limited period, education is provided at school - a formal system, instituted by society for this purpose - but it is provided more especially on an informal and permanent basis by the family and by the social and working environment of the child.

Education is successful if it produces people who can contribute towards the transformation of their natural and social environment, people who play an active part in economic and social development and who, by dint of their work and ability, are instrumental in satisfying the individual and collective needs of their community, There is no doubt that the school system can produce this kind of individual by introducing him to productive work in which the interests and technology related to the level of socio-economic development of his environment are combined. In addition, this ability to produce socially useful goods and services should be encouraged at a very early stage in schooling to ensure that a constructive approach to the manual aspects of productive work is developed.

2) By productive work is meant any intellectual, manual or artistic activity which contributes towards the satisfaction of individual and/or collective needs (nutrition, health, culture, individual and social well-being ...), while

concurrently contributing to the development of human capabilities, with a view to more successful integration in society. If work is to be productive, therefore, it should be instrumental in providing society with useful goods and/or services.

Productive work in school has a socio-economic and a psychological objective since it educates a man in accordance with the real needs of the community and offers him the opportunity of self-fulfilment and freedom so that he can bring freedom to others as an active agent in the development of the community.

3 - Combining education and productive work means subjecting the acquisition of purely intellectual knowledge to the concurrent acquisition of the skills and technical capabilities necessary for the production of consumer goods, and the fostering of a constructive outlook and social attitude. It also implies the rejection of learning *per se* of cultural amateurism and the training of "white collar workers", incapable and unskilled in terms of manual work.

The combination of education and productive work involves more than the simple juxtaposition of two parallel activities, more than the addition, the artificial superimposition, or the superficial scattering of one or two practical subjects into curricula which are still basically theoretical, ineffectual and more or less sterile.

It implies, on the contrary, an interaction between what is said and done in the classroom and what is carried out during productive activities. It involves the ability to effect an integration, an interdependence, and a virtual intermingling of classroom subject-matter with the different kinds of productive activities.

This new educational horizon implies a new philosophy of education based on the idea of schooling as a driving force in the process of social development. It means far-reaching changes as regards content, timetable and even the school calendar, and consequently requires a new type of teacher. There are many advantages to such an approach from three different points of view, viz. the purrely educational, the social and the economic.

Educationally, it enriches the early stages of learning and provides the opportunity for a full integration of all disciplines taught, with a view to ensuring a complete training.

Socially, if offers greater opportunities of equality and social mobility by giving all pupils a common ground of experience.

Finally, economically, education through productive work trains pupils to be producers and their activity makes material and financial resources available, thus reducing government expenditure.

Various strategies are pursued to implement this new educational approach depending on the policies followed, the availability of material resources and manpower and, especially, the degree to which public opinion is aware of and supports educational innovations.

The integration of education and productive work: the Beninese experience

1 - The objectives of the new Beninese system of education

Our new national Education Act, promulgated in June 1975, established a New School, some of whose main characteristics are that:

- school is to be considered as a production unit

- school is an instigator of political, economic and social development
- school is a source of benefit for all.

To realize these objectives, educational production cooperatives were set up, from December 1975 onwards, in all school and university establishments.

Throughout Benin, schoolchildren, pupils and students, within their own cooperatives, undertake animal husbandry, work in the fields, do handicrafts and engage in artistic and cultural pursuits.

An initial assessment of these educational production units carried out in 1977 showed that, from an educational viewpoint, a school cooperative is very effective when it comes to familiarizing students with productive work, introducing them to the concept of democracy and the management of collective property, developing a sense of individual and collective responsibility and encouraging a sense of solidarity. Socially, it helps to make school more a part of society by integrating it with the environment and the running of a production unit. Economically, it guarantees, in the long run, at least the partial self-financing of the school. There are, however, many shortcomings which remain to be remedied:

- management of the cooperatives is often monopolized by the adults in charge (teachers, principals);
- the technical training and supervision available have not, as yet, been able to bring these production units to the desired level of profitability and success;
- adequate technical facilities and equipment are often lacking;
- from a purely educational viewpoint, the integration of subject matter with productive activities has not yet been achieved satisfactorily, due to a lack of suitably trained teachers; The above shortcomings in the aplication of the principles of our Education Act have led to the scheme known in Benin as "the CEMG Comè pilot project on the interaction between education and productive work".

2 - The objectives of the scheme

Five main objectives were assigned to the Comè General Secondary School, regarded since March 1979 as an experimental centre for research into the combination of education and productive work.

1) to design and equip a socio-educative area, installing the appropriate facilities such as hen-house, sheep-pen, fruit garden, silos, play areas, theatre, workshops, laboratories, etc.

2) to examine ways of adapting curricula to a specific environment and to define the approaches and attitudes associated with their application, with a view to encouraging interaction between subject teaching and productive activities.

3) to develop appropriate teaching methods and techniques.

4) to propose in-service training schemes for teachers .

5) to organize productive activities within the school, mindful of the decisive part that it can play in the process of endogenous development.

Our strategy for the realization of these objectives is basically founded on the idea of establishing a dialogue and of maintaining permanent contact with the environment.

- productive activities in school are closely linked to the objectives assigned to the municipality of Comè by the government scheme. They are organized with the collaboration and supervision of non-teaching specialists responsible for other areas of development. They also provide a testing ground for the introduction of new techniques.
- from the social and educational viewpoint, such activities are based on the findings of a socio-economic field survey carried out by students under the supervision of their teachers. An analysis of the findings of this survey shows areas where joint development schemes could be organized involving schools and local communities. It also provides schools with material for classroom projects and research for the implementation of teaching programmes.
- As regards instructors, any local person, skilled in a particular field (rural developer, traditional healer, health worker, craftsman, etc.) is considered a potential teacher who can contribute his knowledge to the school at any time.

Noorul HUQ

CHAPTER VI

Work education in the primary and secondary schools of Bangladesh

In the recent years education is being treated as an agent of development in Bangladesh. The country now needs an education which can ensure the optimum utilization of her human and material resources for the socio-economic development of the country. This essentially implies that education must be so designed as to develop an understanding of the world of work, a love for work, and motivation and skill for productive work. The plan documents of the country have stressed the need for a change in the educational experiences from general education of a liberal type to an education which gives considerable weight to manual work and productive skill. New programmes emphasising work experiences in both formal and non-formal sectors of education have been developed and are already in the process of implementation.

The new curricula for primary and secondary education have two major objectives. They are: development of a respectful attitude towards manual work among the students and to educate them to become creative and skillful so that they can effectively contribute to economic development and social well-being of the country either through job market or through self-employment.

Curriculum for Primary Education

At the primary level emphasis has been given to the development of a favourable attitude towards manual work through individual participation and an understanding of the environment in which the child will work, earn his living and live a worthy social life. To achieve these objectives elements of science and social science subjects have been integrated to make a new subject - Environmental Studies.

Appropriate work experiences have been suggested especially through Environmental Studies, Physical Education and Arts and Crafts. A part of the time allotted for these three subjects has to be utilised for carrying out the practical aspects of the three subjects. To gain work experiences the children will actively participate in keeping their classrooms, homes and surroundings clean; participate in agricultural and other developmental work in the community etc. They will also make dolls, toys, bags, etc. with cloth and jute materials; make other materials like flower vases, ashtrays, etc. with clay; make flowers, bags, etc. with paper and many other things of daily use and for decoration as well.

Curriculum for Secondary Education

The secondary level of education in Bangladesh consists of three stages: Lower Secondary (classes VI-VIII), Secondary (classes IX-X), and Higher Secondary (classes XI-XII). The secondary stage of education is considered terminal for a very large section of the student population in the country. Education with work experiences, therefore, has a great significance for this group of students. This kind of education is expected to solve a large number of youth employment problems. According to the report of the Commission on Education in Bangladesh, every year about 450,000 students between 14-17 years of age drop out of school for various reasons and enter into active social life mostly without having any preparation for earning a basic living. This situation adversely affects both individual and national welfare. The importance of work oriented education at this level is well understood.

The new programmes for the Lower Secondary and Secondary stages have provided for integration of work experiences with education in four subject areas: Agriculture, Home Economics, Industry and Social Welfare. In selecting these subjects careful consideration was given to the education needs in terms of economic and social demands and activities which can be generated and pursued in rural and urban areas. It is expected that both theoretical and practical orientation in these subjects would enable the students to participate in some useful productive work in the society.

A wide variety of work experiences which are essentially relevant to individual and social living have been carefully selected. The work experiences will, of course, involve a survey of the local economic and other productive activities and facilities and other related information to identify the specific work experiences suitable for students of different sex and age groups in a school. The survey will actually provide a basis for preparing a programme of work experiences for the students of a particular school for at least one academic year.

Among the four work oriented subjects - Agriculture, Home Economics, Industry and Social Welfare, one subject of 100 marks has been made compulsory for each student of lower secondary and secondary classes. At the Lower Secondary stage the subject will be taught for five periods of forty minutes each a week and at the Secondary stage for about 190 periods of forty minutes each a year for two years. An open ended strategy has been developed to fit the activities in the school programme with the time available for work experiences.

The teacher and the school administration have the option to extend the programme of work experience activities beyond the normal school timings. To suit to the local situation such activities may also be arranged on days when the school is on holiday.

A novelty has been introduced in the curriculum that provides for participation of the local trade experts and related others in the educational activities of the school and attaching students with local farms, factories and other facilities to give them a first hand experience of real work situations. This approach will hopefully make up for the shortage of trained specialist teachers, and at the same time, will bring the school closer to the community. Their mutual relationship will develop better understanding and may also provide a scope of future employment.

Curriculum for Higher Secondary Education

The Higher Secondary stage has been envisaged as a link between the Secondary stage and higher education. The curriculum of this stage has provided for seven different specialised streams: Agriculture, Business, Economic, Fine Arts and Music, Home Economics, Humanities, Islamic Education and Science. The course offerings for each stream include work oriented subjects as integral parts. A great deal of emphasis has been given to the practical aspects of these courses.

Teacher Preparation for Implementation of New Curricula

The implementation of the new curricula will require proper training of the future teachers and retraining of the existing school teachers. The programmes of the Primary Training Institutes, Teacher Training Colleges and other related institutions will require restructuring to suit to the demands of the new curricula. The Institute of Education and Research of Dacca University has already made some changes in its teacher training programmes. A crash programme has also been designed to retrain the existing primary school teachers of the country. The first phase of the programme which involves the headmasters of the primary schools and the instructors of the Primary Training Institutes is already underway.

Experiments in Work Oriented Education

There have been few experiments in work oriented education in Bangladesh. In the non-formal sector expanded efforts on experimental basis are being made to educate the out-of-school youths and the adults. But in the formal sector, only two experimental studies are known to have been made in the country. They are: (1) Muktangan Primary Education Project, 1976, and (2) Out Door Primary Education Project, 1979.

Muktangan Primary Education Project, 1976

The Muktangan Primary Education Project was an experiment of out-door education to improve the quality of primary education by making it life-oriented and combining it with actual work experiences. The project provided for learning from immediate environment through realistic and practical work experiences so that the children might grow up as useful and productive members of the society. The programme was conducted for three months in 500 primary schools, which involved 2500 teachers and 100,000 students.

A curriculum was developed for the project which was based mainly on the existing primary school textbooks. The idea was to teach some concepts from textbooks in the classroom and to give some practical learning experiences from immediate environment. An elaborate teachers guide was prepared. The teachers guide contained syllabuses for out-of-classroom activities and also from textbooks for classroom use. A three-day training programme was conducted for teacher preparation. Further, to provide support and enrichment to the participating teachers a half-hour programme was broadcast by Radio Bangladesh on every Saturday for nine weeks. The ratio of outdoor and indoor activities was 1:2 in terms of duration.

The programme provided for work experiences for all classes from I-V depending on the age, interest and ability of the children. The activities for such experiences included the following: Village survey; Agricultural work, Making of Handicrafts, Identification and Conservation of Local Resources, Study of local Flora and Fauna, Study of Local Geography, Study of Marketing and Distribution of Local Products, Study of Health, Sanitation and Food Habits in the locality, Study of Local Governments and other institutions, Participation in development and other social welfare activities, etc.

As a pilot project the Muktangan experiment identified some advantages of the outdoor educational activities performed by the school children. The following need special mention:

1. The programme could generate considerable awareness and enthusiasm about the out-of-classroom educational activities among the participating students, teachers and guardians.
2. The programme could establish beyond doubt that as an alternative devise outdoor non-bookish education can be more attractive and more useful to the children than book-centred classroom education.
3. The new approach of outdoor education exhibited its inherent potentiality of combining education with work experiences.

The Muktangan programmes revealed certain shortcomings and weaknesses. The following are some of them which have implications for future outdoor education programmes:

1. Since the primary school teachers are government employed they worked under government instructions rather than as a result of deep motivation. Their training which lasted for three days only was too short to inspire them to work with a purpose and dedication.
2. The emphasis of the programme was more on knowledge of the immediate environment rather than on work experiences as envisaged by the major objectives of the programme.

3. The long list of outdoor activities was taken to the letter by the teachers, and the students were made to try as many of them as possible without accomplishing any one successfully. The outdoor activities were conceived as extension of classroom activities. But in practice they were taken as extra-curricular activities. The actual achievement from outdoor activities should have served as feedback to classroom learning and also should have been evaluated with classroom learnings.

4. The experiment was conducted for a very short period of time, and therefore, did not receive a fair trial.

5. Inadequacy of educational aids, non-provision of midday meals for the children, poor supervision and failure to attract attention of the local people to the school activities were some other weaknesses of the project.

An improved programme - Muktangan Primary Education - Phase II was known to have been launched by the Ministry of Education in 1977. but it was abandoned afterwards.

Out-Door Primary Education Project 1979

The Out-door Primary Education, 1979, was a small-scale experimental project conducted with a view to enriching the primary curriculum by providing life-oriented experiences through the use of community resources and assessing the feasibility of integrating conventional academic knowledge imparted in classroom with the relevant out-door work experiences. The programme was conducted for two months only. About 250 students of classes IV and V of two rural schools, eight teachers of these schools and equal number of volunteers from the school communities participated in the project activities. The time and the scope thus being so limited it became possible to pursue an intensive work of experimentation with the programme.

The project had the advantage of gaining from the lessons of the Muktangan Primary Education Project, 1976. In designing the programme for the project steps were taken to avoid the major shortcomings of the previous project. The schools under the project were made to function not in isolation from the community but in close cooperation with the community. Thus the gap between the life of the learners outside the school and what they learn in the classroom was sought to be reduced. The strategy involved (a) a diagnostic survey of the school communities to identify the educational needs of the children of the communities, (b) selection of reading materials from the existing textbooks or preparation of such materials for classroom teaching which are relevant to outdoor education, (c) participation of volunteers from the communities in the educational activities of the children.

For the project a new course content on outdoor education was developed in the selected topics of Environmental Studies (Science and Social Science) for classes IV and V. Each topic was developed as a complete lesson unit. Corresponding lesson plans were prepared and contained in a Teachers' Guide which provided guidelines for the teachers and the students to enable them to integrate their classroom learning with practices at home and in the community life. Intensive training was imparted to the regular primary school teachers and other community personnel selected for experimental teaching. This work force of the school consisted of people who could establish rapport with the community people and possessed the capability to enlist public support to the programme activities.

The experimental work involved teaching of the materials in the selected schools for two months. Each class meeting was followed by outdoor activities according to a plan prepared beforehand by the school teachers and the community teachers jointly.

The classes on Environmental Studies met three days in a week and on these days the students went out for field work after attending classes for a specified period of time. The children had to maintain record of their outdoor activities for classroom use afterwards. The ratio of outdoor and indoor activities was 3:1 in terms of duration.

The outdoor activities of the programme included: Survey of homesteads, cattle, poultry, etc. in the locality, study of different occupations in the locality, acquaintance with the functioning of gardening, preparation of manure and their application, seed preservation, helping with poultry and cattle keeping at home, keeping home, classroom and the neighbourhood clean, helping the farmers in harvesting, preparing land for sowing, pulling out weeds from agricultural lands and such others.

The evaluation of the programme revealed that the students made considerable improvement in their attitude towards manual work and developed certain useful productive and social skills.

The programme was innovative in nature and the major innovative features were:

1. The specific educational needs of the community formed the basis for selection and development of reading materials for the school children.
2. The people from the community actively participated in the work oriented educational activities which took place inside the classroom and outside the classroom.
3. The children earned while they learnt. The students helped the farmers in harvesting etc. They were sometimes paid for their labour by the farmers in kind. The sale proceeds of the crops thus received were spent for buying midday meals for the children who worked on the farms.

An Overview

The two experimental studies: Muktangan Primary Education Project, 1976, and Outdoor Primary Education Project 1979 seem to have successfully identified at least four vital areas which need particular consideration in designing work oriented education programmes for Bangladesh. They are:

1. Knowledge about the educational needs and human and material resources of the community where the school is situated.
2. Active participation of the community members in the educational activities of the school.
3. Appropriate training in work oriented education of the school teachers who will give leadership to the implementation of the programme and proper orientation of the related others in the community to the programme in general.
4. Proper supervision of the project activities and necessary support to the teaching force in terms of timely guidance, feedback and educational equipments.

To sum up, the introduction of work oriented education with a definite goal to produce a creative and skillful manpower to meet the economic and social needs of the new nation has been taken up with an unprecedented zeal and enthusiasm in

Bangladesh. Provision for work education has been made in and out of curricula, for all types and levels of education. In fact, the idea of education for productive work has been put into practice without giving it a fair trial in the country. Bangladesh practically has taken the cue from the experiences of other countries in the Asiatic region in such educational programmes. Hence, research and experimentation. the importance of which is obvious at this stage, must form an integral part of the work oriented education programmes. This would provide recurring support to restructuring the programmes and developing alternative strategies for implementation. The success of a programme of education for productive work in the country depends largely on such steps.

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CHAPTER VII

Education for production as a lever for educational development in Nigeria: The African Church Comprehensive High School, Ikere, Nigeria experience.

The African Church Comprehensive High School, Ikere Ekiti, Ondo State, Nigeria was founded in January, 1969. It started with three teachers and 69 students but now has 80 teachers and 1,600 students in its five major departments of Arts, Science, Agriculture, Technical and Business Studies.

We, in our school, share the view of Napoleon that an institution or state without a philosophy is like a ship without rudder, it will continue to drift aimlessly. We therefore worked out a philosophy. But our philosophy is a product of two factors. The first is poverty. We existed on our own for clear seven years without Government grants for salaries and capital development. We were forced during this hard period to rely on the force of our labour and be self-reliant.

Second, we are dissatisfied with the type of imported secondary schools that we had around us. This imported schooling exhibited some basic weaknesses, the matrixes of which are:

- the dependent nature of its products, which made the schools anti-developmental force,
- the irrelevance of its curricular offerings
- its rejection of the past and ignoring the future, and
- its use of the school as a control mechanism to pass a few, fail and frustrate many

Our philosophy then centred around production for education and survival, namely, we believe everybody must work because everybody eats. Therefore, you must produce something to consume anything.

In the traditional African society a lazy man is a pariah. He is rejected by society. So it is an abomination for any one to be lazy. Thus, we believe in what Karl Marx says 'that the early combination of education and production is one of the potent means of the transformation of society'.

2. We believe that education is production and any education which is not productive is sterile. We hold that manual labour is an integral part of a class education. It is the intimate linking of the intelligence with the hand.

3. We believe that the school is only one of the agents of education in our community and to educate the child productively the school should make use of local resources.

4. We believe that productive work apart from introducing students to the world of work, also, helps students to understand and appreciate the problems of workers and of production. In this fashion we shall be fighting elitism, disdain for manual work and rooting the school in the society.

5. We believe that productive work, with all its challenges, offers the adolescents the opportunity to divert their youthful exuberances to profitable channels.

6. We believe that we should train our students for life - the unknown tomorrow to which they belong, and not for the certificate. We therefore prioritize

in our training those things that are left when the certificate is forgotten - industry, honesty, creativity, resourcefulness, loyalty, service, leadership - attributes which are in much demand in organised societies.

7. We believe we can reduce education cost and enrich our curricula offerings by producing.
8. We believe in a diversified curriculum to provide for every student. We believe that it is the school that is failing to inspire the students, not the students failing the school.

Our operation

Our school was predominantly boarding before the introduction of non-boarding system. In our prospectus we write in bold print that 'Those who cannot do rough, hard work need not apply'.

Prospective students are told to carry their skill and tools to the school. It is amazing to see the tremendous potentialities of the students. Most of whom have had ideas about carpentry, printing, painting, etc. This is the basis on which we build their future education.

Orientation of new students

During this period students are initiated to school life: waking up at 5 a.m. working throughout the day, no bell ringing for waking up, sleeping or change of lessons. Life in our school is an approximation to real life situation. Also students work in the night too because some occupations like baking, photography, tailoring, etc. are carried out in the night.

Similarly, students work on Saturday and on Sunday after church worship. All these imported obsessions have no roots in the traditions of our people more so in a country where poverty strikes and rural areas hardly have the basic necessities of life.

The orientation period is also used for learning the school song, the school prayer, to undertake endurance exercises, take care of the livestock, for assigning students to their farm plots, their daily morning work, and to introduce them to the various club activities.

Our agricultural projects

Our school is situated in a very rich agricultural land. We quickly seize upon this opportunity to make agriculture a compulsory subject in the school. We planted maize, yams, groundnuts, cassava on rotational basis and we have plantations of cassava, rice, cocoa, rubber and banana. We built two dams to serve as water supply for the school and as fish farm. We established a piggery of about 120 pigs, a poultry of 3,000 birds and a rabbitory. Students fried gari and Home Economics students prepared buns for our canteen and manufactured our much cherished "Afrikoko' from processed cocoa seeds. In all, our farms generated enough funds to offset maintenance costs and the profits made were ploughed back to building classrooms, laboratories, our workshops, our postal agency, a health clinic, staff quarters and in addition we bought equipment and machines. The main objective is to introduce students to the correct work ethics.

Club activities

The club activities are like the traditional African age-grade or apprenticeship system. Our club activities provide training at various levels in some eighteen different skills. These clubs act as both productive enterprises and centres of skill training and education. Every club is to produce. The production is organised both for training, cost recovery and for profitability. Thus, our builders club built the classrooms. staff quarters, hostels dining hall and the school's ₦250.000 Great Hall. which accommodates 3.000 people. The draughtsmen prepare the plans for the bricklayers to set the wall. the carpenters to make the roof, the electricians to wire, and the painters to paint. The challenge posed by lack of electricity was met by the builder's club who fabricated our own concrete electric poles for the electricians to draw the wire. The Home-economics with the Agricultural science students prepared our Afrokoko drink. The welders and the carpenters built our chairs. The bakers bake bread, the printers work on our printing jobs. Each of the clubs cut jobs from outside too. These clubs of farmers, carpenters, electricians, painters, butchers, cultural dancers, typists, singers, bricklayers, furniture makers, welders, shoemakers, tailors etc. have made substantial contributions in providing the much needed facilities for the school apart from impartation of skill to students.

In these club activities every member, including the teachers, is a learner, a teacher and a worker. Teachers and students work together to grow vegetables, print books, repair tractors, service cars, bake bread as part of their daily life in school. Club members choose their own officers, programme their work for the year, organise the production, marketing, sales and keep an accurate account of their proceeds. For example, the bakers apart from feeding the school, made a profit of ₦3,500 in the 1979/80 session alone.

Teachers

Those who are called to teach in our school must first learn how to continue learning when they begin to teach. Teachers and instructors in our productive activities are men and women with skills to sell. What we require of them is the skill, the commitment and the loyalty. Teachers are not specially trained for us, but we train them for our system. Some illiterate artisans and skilled men come to school to teach the students. After all, illiteracy is not idiocy. It is our belief that productive education will never yield the desired dividends unless we subvert the archaic and obsolescent conditions imposed by formal education. Christopher Wrenn, a mathematician, designed St. Paul's Cathedral, London.

Upgrading Skills

Students when assigned during holidays to various artisans upgrade their skills because creative education requires peers currently puzzled about the same terms or problems. Students thus exposed, return to school with a new vista of ideas and a wider horizon, and with full realization that they are not alone in finding solutions to society's problems. In this way, like in our annual Agricultural Festivals, Business Week, Literary and Cultural, we sell the community to the School and the school to the community. In short, we employ all available local resources in the realization of the objectives of our productive activities. A woman dancer and singer teaches singing and a potter complements the ceramic teacher in the studio.

Effects

The effects of our productive activities are tremendous. On our students, the activities are injections for sound health of the body and mind. The minds so diverted to production hardly have the time to think about wanton destruction or any disruptive violence. Students cannot think of destroying what takes them time to build. They are always inspired by their own creation; even their result in the School Certificate Examination bears eloquent testimony to the fact that their activities had helped to stimulate thinking rather than stultify it. They develop team spirit and imperceptibly acquire tolerance, perseverance, honest leadership, service and justice-attributes which are often parroted, but seldom demonstrated. This programme has coped with the problem of lack of resources which keeps young people out of school by integrating study and productive work, which makes it possible for students to create new resources whilst training.

The various activities offer the students a fertile ground for the practise of the ideals of democratic life of freedom, justice and service. The clubs can justifiably claim to be a comprehensive tool of development. They provide training and education whilst drawing minimally on the scarce resources of the Government. For no country can provide everything for its schools and schools cannot be beggars and be self-respecting.

And even then a system of schooling that complements all peoples· social utility is also not possible. They are instruments of innovation. They also offer a more relevant and dynamic system of education and training than the formal system. The type of education we give has received national recognition. Principals of schools at state and federal levels have been made to visit the school to understudy our system and adopt our philosophy and practice. The National Committee on Education, made it a model for the new Secondary schools in Nigeria. All schools are to grow comprehensive and students are to make substantial contributions to their education. The idea of the school has been researched by Universities and publicised by press and radio and carried across the high seas.

Problems and Suggestions

However, a programme like this cannot but have its problems. Over the years the programme has been under criticisms, pressure and attack from many within it and more outside it. At first, students resented the workload associated with the production more so when not related to their final Examination Syllabus, lazy teachers grumbled at this type of extra work, parents saw production work as slave labour. Conservative Government view it as a lowering of standards. Yet the combination of education and production, however valid and universal in principle it may be, and however the need for it is endorsed in Nigerian schools, remains a tender plant, insecure and in need of nurture. Its success depends on finding the necessary cadres to organise, manage, teach and train on a massive scale. Relevant tools and technologies must be identified for use in different situations. Appropriate curricula need to be established at all levels of education in which productive activities are to be inserted. Teachers trained in the conventionals need reorientation. New methods of evaluation need to be developed. The concept of education and production itself needs to be publicized, explained, defended and promoted. To do this, and to implement the concept, historically and at the present time, an authoritative publication is required. The UNESCO Experts have a lot to give Nigeria in this regard.

Conclusion

Education and production is not a new idea. It is not exclusively a Marxist idea. It is African in concept and in practice. It is the only answer in a poor country with very high consumption taste and where meagre resources have to be shared among competing social facilities.

It is the imported education that tends to destroy the basis of the education of the traditional African child. Where the student assumes responsibilities together with the teacher, to learn by doing and grow by experience for their own learning experience, that everybody is at the same time a learner, a teacher and a worker. This was embodied in apprenticeship, in the work of Robert Owen, in the British Factory Acts, in the work of Rev. Alley in China and Ghandi in India. It is a great tradition which imported education has battered and shattered in its bid to create an elite class of consumers which has thus destroyed the fullness, the participation, the vitality, dynamism, the potentials for liberation and self-reliance of education and production. It has therefore been our self-assigned and sacred duty in the African Church Comprehensive High School, Ikere, to rediscover it and assume it in a new and revolutionary perspective.

CHAPTER VIII

Work and education in India - an overview

In laying down the policy on Indian education in his celebrated Education Minute of 1835, Lord Macaulay, the British intellectual, wrote, among other things, "a learned native is one who knows the poetry of Milton, the metaphysics of Locke, and the physics of Newton." The implications of this policy continued to dominate Indian education through the years till attainment of independence in 1947 and even beyond. As a consequence, education became excessively bookish and academic, an almost passive acquisition of knowledge on the learner's part, the child being treated as a pitcher into which are poured 'gallons of imperial facts'. Knowledge, development of the intellect, and appreciation of spiritual values became the supreme objectives in an education designed for, and confined to, the élite class, the common mass being consigned to the 'culture of silence' in which it was safely submerged. Thus the Indian society was divided into two groups. The first is a small group of an educated, cultured and leisured class brought up by the formal system of the so-called liberal education which refused to be contaminated by the learner's participation in any kind of manual labour or productive activity. The second group consists of the masses who are the real producers of social wealth, who go about without any formal schooling, and generally remain un-educated, uncultured and unleisured. Those who have dignity do not labour and those who labour do not have any dignity. This is precisely the reason why dignity of labour or socially useful productive work formed no part of the school curriculum in India for a long time.

Gandhi's craft-centred education:

Mahatma Gandhi protested against this verbalism and elitist character of Indian education, and tried to convert this elitist structure into a mass structure by making it relevant to the life, needs and aspirations of the common man with emphasis on productive work as an important component of school education. According to him the traditional educational structure was weighted in favour of the parasitic intellectual class and against the exploited mass. He, therefore, tried to reform and revitalize Indian education so as to demolish the invidious distinction between the classes and the masses, and thereby, create a non-exploitative and egalitarian society in which every individual would be educated, cultured, socially responsible, and economically productive. He argued that this dream could be realized only if the education system was built around craft or productive manual work which would enter into the life and value system of every citizen. This craft-centred education was designed to build up a social structure which would do away with the dualism between theory and practice, knowledge and action, learning and doing, and labour and leisure. Through use of craft, Gandhi hoped to usher in democratic socialism based on non-violence against violence, co-operation against competition, and service of society against exploitation.

The following are some of the strengths of the craft-centred education as propounded by Gandhi:

a) It attempted to build the curriculum round local familiar crafts in such a manner that craft-centred education becomes not education and a craft, but education in and through craft.

b) It tried to bring about better integration between the education imparted in the school and the local environment, physical and social.

c) From the economic point of view, it tried to make education self-supporting by diverting the profits earned from craft-work to meet the entire cost of education.

d) Its insistence on a familiar local craft is a recognition of the psychological principle that learning must proceed from the known to the unknown.

e) It makes instruction at the early stages concrete, as a relation of education with actual living experiences of the learner is emphasized.

f) It satisfies the child's craving for action and movement, inquiry and exploration of environment.

g) Since craft means socially useful activity, the child from the very beginning is taught to recognize his function as a useful member of the society.

For various reasons, the programme of craft-centred education did not make as satisfactory a progress as desired. It met with a hostile reception at the hands of the conservative elements, who were more concerned with the perpetuation of the status quo than with the advent of the new social order envisioned by Gandhi. The critics pointed out that the introduction of the craft at an early age deprives the child of his care-free childhood, which is necessary for the unobstructed development of his natural faculties. It was further alleged that craft not only tended to become forced child-labour under the guise of non-verbal, productive education, but was also anti-intellectual and non-academic in its approach. Emphasis on local craft, it was argued, would retard the progress of industrialization in the country and put the clock back. Thus Gandhi's dictum that 'the brain must be educated through the hand' remained only an empty pronouncement.

Education Commission on Work-Experience:

After independence in 1947, a number of committees and commissions were appointed to recommend changes in the system of education, the most important being the Education Commission, 1964-66 under the Chairmanship of Dr. D.S. Kothari. One of the major recommendations of this Commission was introduction of work-experience and social service as integral parts of general education at all levels. Recognizing the role of education as an instrument of social and economic transformation, the Commission laid great emphasis on work-experience, which, it defined, as "participation in productive work in school, in the home, in a workshop, in a farm, in a factory or in any other productive situation." The Commission identified the following four elements as basic to any good and purposeful education:

i) 'Literacy' or a study of languages, humanities and social sciences;

ii) 'Numeracy' or a study of mathematics and natural sciences;

iii) Work experiences; and

iv) Social service.

The Commission desired that education should be linked to productivity and also be an agent of social integration through work-experience and social service. In a traditional society like India, the individual child grows up through participation in hereditary activities of occupations, and thus work-experience forms the bulk of his non-formal education. Although this non-formal approach to work experience has several advantages, it is not scientific or forward-looking and tends to perpetuate traditional patterns of behaviour associated with hereditary occupations of rural India. Formal education, on the other hand, withdraws the learner from his traditional moorings and primitive community activities, and trains him in an artificial environment with a view to his anticipated future role in the society, thereby creating a cleavage between the world of work and the world of study. The Commission, therefore, attached greater importance to modern work-experience programmes to integrate formal education with science-based technology. The Commission summarized their recommendations on work-experience in a single sentence, "Every attempt should be made to orient work-experience to technology and industrialization and to the application of science to productive processes, including agriculture." Thus it may be seen that work-experiense, as conceived by the Kothari Commission, was more weighted in favour of science and technology, and therefore seemed to lack the component of social usefulness in the context of the needs of traditional rural Indian society.

Since work-experience programmes recommended were for a science-based industrialized society. it is no wonder that they could not run into the veins of school curricula for want of needed reinforcement and social relevance.

Review Committee on the Curriculum for the Ten-Year School on Socially Useful Productive Work:

In 1977. a Review Committee was appointed under the Chairmanship of Shri I.J. Patel to make an objective assessment of the curriculum and textbooks used in the ten-year high schools in pursuance of the recommendations of the Education Commission and the ten-year high school Curriculum Framework developed by the National Council of Educational Research and Training. The Committee found school education "still predominantly bookish in character and generally irrelevant to the needs of society." As the science-based work-experience programmes, recommended by the Kothari Commission was found out of step with the Indian society, the Patel Committee suggested 'Socially Useful Productive Work' in the place of work-experience. This SUPW was defined as "purposeful meaningful, manual work resulting in either goods or services which are useful to the community." It emphasised that SUPW should be a distinct curricular area and developed along the lines suggested by Gandhi's Basic Education.

The Committee writes, "We are advocating not merely education plus work but education in and through work; this is the basis of the Gandhian philosophy of Basic Education."

This SUPW was broadly conceived to realize the following major objectives:

i) To inculcate positive attitudes to work in the students;

ii) To remove the dichotomy between the world of study and the world of work;

iii) To make the learners aware of the developmental programmes going on in the community and motivate them to participate in the same;

iv) To develop the habit of co-operative work;

v) To learn to apply one a classroom knowledge to solve the problems of the community;

vi) To provide opportunities to integrate natural science, social science, humanities through productive activities in the context of social needs; and

vii) To realize the goals of the State and national development.

The work education programmes in Indian high schools (grades I to X) at present are mainly based on the recommendations of the Patel Committee.

National Review Committee on Higher Secondary Education on Vocationalization:

In 1977, a National Review Committee on Higher Secondary Education under the Chairmanship of Dr. Malcolm S. Adiseshaiah was appointed to recommend, among other things, a plan of action for introduction of vocationalization at the higher secondary stage of school education (grades XI to XII). In its report entitled 'Learning to Do', the Committee high-lighted the following:

i) Learning must be based on work - either through SUPW or through vocationalized courses;

ii) It spelt out in term of curriculum, syllabus outline and evaluation the vocationalized courses to be offered at the higher secondary stage;

iii) These vocationalized courses should be in agriculture and related rural occupational areas and in managerial, commercial, health and para-medical vocations; and

iv) There should be two streams at the +2 stage - an Academic stream and a Vocational stream with provision for transfer from one to the other through some bridge courses designed for the purpose.

From this brief over-view it will be clear that various attempts have been made to link education with work, productive and national developmental programmes of the country.

Some observations on the Introduction of Work Education in Indian Schools:

A. Selection of Activities:

The size and the complexity of the problems confronting the country should always make for flexibility in the selection of activities and experiences in respect of work-education. It would not be a workable proposition to recommend the same type of programmes for all categories of pupils ignoring their life-styles, needs and aspirations. Work areas should be carefully selected keeping in view the following three criteria:

i. Work should be productive;

ii: Work should be educative; and

iii. Work should be socially useful.

Also, the nature of work and the treatment it should receive in the school should depend on the stated objectives of education:

1. Whether to simply expose the students to the realities and problems of the community; or
2. to make them actively participate in the productive processes in the community; or
3. to involve them in the community activities so as to make them aware of their role as agents of change.

The school should also have the freedom to select their activities in keeping with local needs and conditions. It should select work-areas from the point of view of its

i. Location - rural, urban or tribal;

ii. Philosophy of work - Gandhian, Marxian, etc. work as end or means;

iii. Resources available;

iv. Background and previous experience of work-education; and

v. Clientele - rural boys, rural girls, urban boys, urban girls, tribal boys, and tribal girls, etc.

B. Planning the Programme:

It has been our experience that inadequate planning has impeded work-education in Indian schools. For effective planning, the following steps are considered necessary:

i) Baseline survey and locating needs and resources: it helps to identify the needs and problems of the community served by the school. This survey will make the learners sensitive to the realities of the prevailing situation and instill in them a sense of responsibility and commitment to the community.

ii) Giving priority to the needs: The survey brings to sharper focus the various needs of the community round which work-education programmes could be organized. The learners get an opportunity to assess the various needs and arrange them in an order of priority. They appreciate the magnitude of the task involved and exercise their best judgement as to how to meet the needs according to a priority order within a fixed time target.

iii) Outlining the programme: The outline of the programme should be drawn up with the help of the pupils, teachers and resource persons from the community. The details of the activities involved should be worked out prescribing the specific time-limit for each activity within the budgeted work schedule. Individual assignments and allocation of responsibilities may be fixed at this stage of planning to ensure maximum involvement of different categories of personnel.

iv) Conducting the programme: while conducting the programme care should be taken that the various activities involved should be completed within the prescribed time duration so that work-education does not encroach upon other academic programmes of the school and unnecessarily bind the community people who are to attend to their own responsibilities elsewhere. This is a crucial stage as experience has shown that perfunctory execution of a programme becomes ultimately an exercise in futility, creating general resentment against work-education as such. Also at this stage, the required materials should be made available readily for conducting the activities, which would help in economizing time and energy of the pupils and others involved in the project.

v) Evaluating the Programme: This is an important dimension of planning and execution of the programme. Evaluation report should answer questions like (a) in what way was the project useful to the community? (b) What did the pupils gain in terms of knowledge, skills and attitudes by participating in the project? (c) What were the difficulties encountered in the execution of the project? (d) What positive changes were discerned in the attitudes of pupils towards manual work or dignity of labour? (e) To what extent was community co-operation available? (f) Was it helpful in bringing about the desired integration among various school subjects like Sciences, Social Sciences and Humanities? etc.

C. Suggested Projects for Indian Schools:

In a country like India, work-education programmes are generally drawn from the areas of (i) health and hygiene, (ii) food, (iii) shelter, (iv) clothing, (v) culture and recreation, and (vi) community work and social services.

A study of work-education programmes in Indian schools reveal that a wide variety of programmes drawn from the foregoing six areas are generally included in the curriculum of the ten-year High School. The principal activities are:

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i) Survey of food habits of the community, its awareness of sanitation, health. hygiene, etc.

ii) Health and nutrition projects in backward rural and tribal areas.

iii) Cleanliness of homes, roads, schools, community centres, etc.

iv) Construction of houses, roads, embankments, etc.

v) Spinning and weaving in areas where cotton is grown.

vi) Celebration of national holidays and festivals.

vii) Organising libraries, book banks, etc.

viii) Technology-based projects like radio-servicing, air-conditioning, bicycle repairing, etc.

ix) Food preparation, food preservation, etc.

x) Tree plantation

xi) Mobile science laboratories

xii) Conducting non-formal education centres

xiii) Short-hand, type-writing, secretarial practice, etc.

xiv) Fine arts

D. Preparation of Teachers for Work-Education:

The National Council for Teacher Education in their Teacher Education Curriculum Framework, (1978) have recommended that the future teacher, among other things, should perceive his role as an agent of social change in the community, act as a liaison between the school and the community, and employ suitable ways and means for integrating community life and resources with school work. Therefore, working with community has been included in the teacher-education curricula for different levels of teachers as an important component. Generally speaking, the NCTE Framework has made the following distribution of weightage in terms of time devoted to each area:

i) Pedagogical theory - 20%

ii) Methodology and Practice teaching - 60%

iii) Working with the Community - 20%

Working with the community is an innovation in teacher-education programmes, and many teacher-education institutions in the country have recently revised their curricula so as to include this important component. No system of education can rise higher than its teachers, and it is expected that the teachers, who would come out of the new curricula as proposed by the NCTE, would be in a position to implement work-education programmes in the community with proper spirit and dedication, thereby taking the Indian system of education closer to the vision of Mahatma Gandhi.

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CHAPTER IX

Education and work: an approach to anticipatory socialization

1. The promotion of work in education is not intended to meet merely economic requirements, i.e. preventing or lowering unemployment in countries with market economies or narrowing the gap, in countries with planned economies, between the aspirations and the training level of young people and the needs of Society. It must be, as emphasized by the UNESCO Report "Learning to Be" regarded primarily as a major contemporary imperative for an education (both formal and informal) capable of meeting the requirements of genuine development of the human personality and of creative integration and participation in social life, so that education may be a factor aiming not at social reproduction but at innovation and progress. Yet such a humanistic radical and democratic, anti-economic and anti-technocratic approach requires - as Gelpi put it in his paper on "Re-thinking the Relationship between Work and Education" - the study of educational development alternatives starting from existing production relationships with a particular society. Up to now, education - notwithstanding its remarkable evolution - has reproduced the archetype of Platonian idea: (a) schooling exclusively for those who do not work and the absence of further education for those who work; and (b) schooling in which theoretical knowledge is divorced from practical activity, science from production, learning from work; in other words, DIVISION OF EDUCATION AND LABOUR, LEADING TO AND LEGITIMATING THE DIVISION INTO SLAVE AND MASTER, INTO EXPLOITED AND EXPLOITER, INTO OPPRESSED AND OPPRESSOR. The present-day educational system in more and more societies is proving its incapacity to meet the specific requirements of modern economical and technological development and of radical changes in social relations. In referring to the "uncoupling of education and work", W. Adamski stresses that "educational establishments are now unable to cope efficiently either with changing technological and occupational structures, or with the demands of the economy or with the hierarchies of people's values and educational aspirations.

Our paper attempts to investigate one major issue that, in our opinion, is fundamental in achieving a shift in the functions of education from reproduction of the social structure to inducing social change: i.e., the way in which the present and future development of education may diminish and possibly eliminate the work-education gap inherent in traditional school systems, and also abolish the essential differences (and contradictions) between manual and intellectual work as a major goal, for the full assertion of man and for equity in social relations.

2. The Romanian educational system is now passing through a period of structural changes, the main goal of which is the integration of education-production-research (IEPR). In keeping with the present and long-term requirements of Romania's socialist development, steps have been taken in order to achieve, on the base of a unitary, comprehensive strategy, a better organization and orientation of education at all levels. It is aimed at ensuring young people's many-sided personality fulfilment and, at the same time, their training for a particular job and the acquisition of knowledge necessary for both their self-realization and their social participation. Based on the general principle of training and educating youth by work and for work, the goal of these changes is to make the development of practical skills, productive activity, and the ability to search and discover, intrinsic component parts of the teaching/learning process, beginning with the very first stages of knowledge acquisition.

Instead of their traditional separation in time and space, education, work and research are now to be integrated by their organic interweaving of knowledge and production, of theory and practice, based on the transformation of schools into learning, production and research units and on radical changes in the curriculum. Without losing sight of its specific education features (e.g. the requirements of a genuine teaching process, pupil s age, individual abilities and interests, etc.), the aim of IEPR is to raise the scientific and pedagogical level of education, to increase its social efficiency, to see that the school environment develop as far as possible along lines similar to those of the production environment, to provide broader practical knowledge and skills and to stimulate creative thinking, and to train young people to become committed participants in the process of social development.

Already when initiated several years ago, IEPR brought about significant changes in the content and organization of the teaching and learning process of all levels of schooling.(1) Thus we may briefly mention: the integration of production acts into the school-curriculum, increasing specialization of lyceum education, modernization of teaching and learning methods and development of new patterns of relations between teachers and students.

Scientific research is meant to contribute actively to the critical appraisal of these changes by approaching the actual development of schooling in relation to the present and future requirements of society; it points to the disfunctions to be noted or that might appear in the long run; it clarifies the means to solve the possible contradictions; and it works out forward looking models for the improvement of the school system, which might serve as the basis for future decisions. Within this framework, besides the various investigations carried out in Romania by social scientists and teachers (S. Stoian, M. Malita, V. Radulian, P. Barbulescu, L. Vlăsceanu, A. Cazacu, E. Paun and others), it is worth while to mention the surveys undertaken by the Youth Research Centre. As a continuation of the investigations carried out in the preceding years (F. Mahler, A. Mihu, C. Schifirnet, 1973; D. Bazac, I. Dumitrescu, F. Mahler, V. Radulian, 1974; D. Bazac, F. Mahler, 1974, 1975, 1978), the Youth Research Centre has carried out a new research project which is directly dedicated to the process of integration between education, production and research.

3. With respect to the future development of schooling and education, a number of forward looking models postulate a long-term invariability of the HIERARCHICAL structure of vocational, occupational and social statuses and roles. According to these models, the future preservation of a social hierarchy of various levels of skills and specialization will necessarily be reflected in the persistence of the different schools streams characteristic of the structure of traditional school. The streaming refers to the differentiation between educational institutions which train for manual work and those which train for intellectual work, followed by the subordination of simple work as compared with complex work, routine as compared with creative work, and execution-oriented work as compared with supervision. These models presuppose, therefore, reproduction by the educational system of the existing social relations (see the criticisms developed by Althusser, Bernstein, Boudon, Bourdieu, Baudelot and Establet, Bowles and Gintis, Coleman, Ferge, Gelpi, Isambert-Jamati, Jencks, Meier, Subkin, Sochodolski and others).

It is quite obvious that this "asymmetry" of the traditional system of education itself reflects the social "asymmetry" between manual and intellectual work, but at the same time it contributes to its legitimation, consolidation and reproduction. In order to remove this "asymmetry", it is ultimately necessary to remove the economic, social and political basis of the legal and moral status that places manual work at a disadvantage versus intellectual work. At the same time, it is equally important to remove the status inequalities generated by the schooling streams.

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(1) General compulsory ten-years education made up of primary school - 4 years, gymnasium - 4 years, first lyceum level - 2 years, followed by the second lyceum level - 2 years, or vocational training - 1 year, 1 1/2 years, and higher education.

In contrast with the approaches mentioned above, we would design a different prospective model, in which the probable tendencies of skill diversity would be subordinated to changes in the quality of work and in the character of the social and power relations, aiming at achieving equal social statuses and, implicitly, at the reduction and removal of the schooling inequalities responsible for the maintenance of further status inequality.

OUR FUNDAMENTAL THESIS IS THAT, AS A RESULT OF SCIENTIFIC AND TECHNOLOGICAL REVOLUTION, WITHIN THE SOCIALIST SOCIETY A CONTINUOUS DIVERSIFICATION OF VOCATIONAL AND OCCUPATIONAL STATUSES AND ROLES WILL OCCUR CONCURRENTLY WITH THE HOMOGENIZATION OF SOCIAL STATUSES AND ROLES.

As the genuine experience of Romanian education already indicates, IEPR determines significant changes in the goals, content, methods and structure of the educational system, as well as in the nature and role of the school and of its relations with production and society; these changes are aimed at abolishing the opposition, i.e. the essential differences between manual and intellectual work as an integral part of the broader process of removing the opposition and the essential differences between routine and creative work, repetitive and innovative work, execution oriented work and supervision, between work devoid of significance and intrinsic value and work with inherent significance and intrinsic value, between unilateral and multi- or omnilateral work, in a word between ALIENATING AND EMANCIPATORY WORK.

4. WE BELIEVE THAT THE BASIC PERSONALITY OF OUR FUTURE SOCIETY WILL BE THE INTELLECTUAL-WORKER. THIS WILL BE AN IDEAL TYPE OF A HOMOGENOUS SOCIAL STATUS, WHICH EXPRESSES ITSELF THROUGH A MULTITUDE OF VARIOUS STATUS PERSONALITIES, AS DEFINED BY A BROAD DIVERSITY OF CONCRETE VOCATIONAL AND OCCUPATIONAL STATUS AND ROLES.

The long-term goal of IEPR is, therefore, the emergence of a creative intellectual worker to be distinguished both from the attempt to turn the worker into an intellectual as such, with industry developing on scientific bases (intellectualist view), and from the opposite (proletcultist) view, turning the intellectual into a worker as such, with science becoming a force of production.

HENCE THE PROCESS OF IEPR MUST CREATE A FRAMEWORK OF OPPORTUNITIES FOR THE ACQUIREMENT OF THEORETICAL AND PRACTICAL KNOWLEDGE, ALSO ENSURING SOCIALIZATION OF YOUTH FOR THE FUTURE STATUS AND ROLES CORRESPONDING TO THE OCCUPATIONAL DIVERSITY AND SOCIAL HOMOGENIZATION DEFINING THE INTELLECTUAL WORKER OF THE FUTURE.

5. Traditional education (Socialization type A, Figure 1) even while training students for life and for the requirements of social and economic development still socializes individuals by ensuring a strong isomorphism between their present school status, and roles and their future work status and roles, preserving their separation in time and space. Within the new framework of IEPR, socialization (type B, Figure 1) becomes radically different: it implies an essential transformation of the transitional school status and roles themselves, that now combine, to various degrees and in various forms, the elements inherent in the status and roles in school and production. The following figure gives a schematic outline of the two socialization types mentioned above:

Socialization type A:	from learning to	production
(Past) inherited status-role	(Present) transitional learning status-role	(Future) achieved production status-role
Socialization type B:	from learning and production and	production to learning
inherited status-role	transitional learning and production status-role	achieved production and learning status-role
FAMILY STATUS	EDUCATIONAL STATUS	OCCUPATIONAL STATUS

Fig. 1

Clearly such a change, which is now being brought about within the complex reality of our educational system, will necessarily imply changes in the content of the socialization process, particularly in the relations between school and the work organization regarded as specific milieux of the overall social environment of a given society, at a certain moment in its evolution.

Philip Wexler's criticism, with regard to Western societies, of the transposition to school of the model of the capitalist factory seems to be fully legitimate. But, although in the socialist society, once the very nature of the relations of production has been changed, the whole issue will be radically different, it is still important that the isomorphism between the educational and the production environments should not regress to a mechanical transcript and to the arbitrary introduction into schools of elements specific to industrial production.

In fact, even under the conditions of IEPR, socialization does not intend to identify the school milieu with the production environment; it is obvious however that one of the major problems in ensuring the integration of graduates into work and social life in general is to link school and production milieux as closely as possible. Thus, the question is what the distinctive features of these sub-systems are, i.e. the content of activity, the characteristic of inter-human relations, of the prescribed norms and observed rules, of the goals and values, in a word, the "habitus" (P. Bourdieu) specific to the school milieu and to the production milieu. The orientation of the whole process of integrating seems to be essentially in this regard learning with work towards the objectives of dealienation. For only technologically creative work (in which repetition is increasingly overcome by innovation, and passivity by active involvement), and socially emancipatory work (in which task execution is alternated with decision-making) may be truly considered as useful education for the assertion of personality and for the development of society.

On this basis one must find the appropriate means to ensure that, without losing its specificity, IEPR brings about the socialization that will meet the requirements of both the economic and social efficiency of schooling and of personality fulfilment. In this respect, we believe it is necessary to conceive socialization not merely in terms of its adjustment function, or as an instrument of social status quo reproduction and preservation, through internalization and conformity with the dominant norms and values. If it is desirable that socialization should become a real and efficient means for social change, first it must be related to conflict patterns between progressive and conservatory norms and values and secondly, but most important, it must also acquire the prospective dimension of "anticipatory socialization" (Marton). IEPR necessarily provides a particular "anticipatory socialization" resulting not in mere adjustment, passivity and patterns of mechanical integration into existing realities, but leading to the full assertion of students as creative personalities, with social initiative and commitment for improving society. Thus IEPR sets up the framework for a new type of socialization, making it possible to overcome undesirable conforming to existing situations and demonstrating the school's real power of social change and innovation. As such it is consonant with the new model of an anticipatory and participatory learning process, promoted by the Club of Rome Report "No limits to learning" (Botkin, Elmandjra, Malita).

6. In order to achieve this radical change of the educational system, a new approach to the functions of the school in the development of society becomes necessary, recognizing the influence it can exert and ensuring that it has the fullest possibility to play its role in transformation, by providing for the revolutionary changes in schooling itself, which the development of the forces and the relations of production as well as of social relations demands. That would imply changing both society and the content, structures, organization, methods and goals of schooling, so that they should not only be adequate but should also prepare and even generate the future social structures.

This approach should also make full allowance for the assertion of the younger generation as a powerful social force by developing a sense of economic, political and moral unity between young people in schools and universities and working youth, reducing marginality and conformity and enhancing youth's commitment and creativity in society. A related process is the growing social homogenization of youth due to generalization of secondary education and the dominance of the new forms in which education is organically linked with work and work with education. Thus, the traditional difference, induced by the separation between school and production, between youth as a LEARNING-AND-NON-WORKING life span and maturity as a WORKING-AND-NON-LEARNING life span will cease to be further reproduced.

The abolition of the division between those who learn and do not work and those who work and do not learn, of the division between schools that train for positions of power and exploitation of other people's work, and for positions yielding to domination, means the elimination of school and production division, which mirrors and reproduces the division of labour and society into worker and exploiter, into slave and master.

The projected model of a school of learning and working continues and develops on a quite new, modern basis the archetype of "initiation" and "rites of passage", the traditions of the school of the classical "polis" and apprenticeship of the mediaeval guild, of the so-called "école buissonière" and the "arbeitschule", the experiments of "extra muros" schools and the "parallel education". And yet in this line it represents a novum. Following Lukacs' thesis on the teleological constitution of work (G. Lukacs), it attempts a radically new conception of the education process integrated with work, based on the new role of production in social emancipation of men.

Thus, the projected model involves the linking of learning and work which will combine education with action and discovery, reproduction of stored knowledge with production of new knowledge. Such a new school becomes part of a consistently humanistic approach to achieve the omni-lateral human personality by means of dis-alienation, to which Marx referred. This goal is to be attained only by reintegrating knowledge with work, humanistic culture with technical and scientific culture in a framework of social emancipation and plenary accomplishment of the multilaterally and pluriformally developed human personality.

Linking education with production, that is, integrating theoretical training with practical work, must not be regarded as an end in itself but as a means for assertion of a many-sided personality, and for active and creative integration of the individual in society, as well as for the development of new social relationships based on the principles of social justice.

An education integrated with work, and a schooling system combined with production imply a new theory (and practice) of learning and social action, both aimed at emphasizing the educational role of practical activities (what Gelpi terms "learning experiences in everyday life") and, at the same time, towards increasing and realizing the full potentialities of an emancipatory practice. Thus "Learning by doing" combined with "doing by learning" may become essential features of a type of PRAXIS in which man not only develops in the course of his changing natural and social environment but more particularly, transcends the given reality through self-development.

Marjorie MBILINYI

CHAPTER X

Education and productive work productive work and education: the development of Tanzanian education reform

Historical Background

Tanzania became independent in 1961, after nearly 76 years of German and then British colonial rule. Prior to colonial rule, penetration of merchant traders in combination with internally-based social transformations had led to a high degree of variation in terms of the development of relations of production and forces of production in different areas. The reproduction of a large number of people was already dependent upon production of ivory, slaves and other commodities for long-distance trade tied to the worldwide capitalist market by the mid-19th century.

Colonial rule accelerated the process of destruction of precapitalist production relations through the commoditisation of peasant production and reproduction on the one hand, and the development of a limited market for wage labour on the other, tied mainly to plantation agriculture and secondly to commercial and mining interest and to the government apparatuses. Struggle over control of the organization of the exploitation of peasant labour began during this period and continued during the post-colonial period, punctuated in 1967 by the Arusha Declaration which established socialist revolution as the direction of struggle of the Party and the masses.

The majority of Tanzanian citizens (about 90%) remain peasants, not out of choice but due to the limited development of industrial capacity thus far. Foreign exchange earnings rely primarily on export of agriculture commodities (cotton, coffee, tea, sisal, tobacco, etc.) which become raw materials for the factories of capitalist industrial nations. At the same time, machinery and chemical-based and other raw materials are imported into the country to sustain the basic industrial strategy which is just under way. The largest import bill is for petroleum products, for which 50% of total foreign exchange earnings is committed. The internationally worsening terms of trade are injurious to the national economy, and particularly to industrial development, and to the capacity of peasants themselves to reproduce themselves with the land, livestock and other means of production at their disposal. Struggles to create the conditions for socialist revolution, including reforms in education, must be seen in the light of these economic conditions embedded in the worldwide capitalist economy.

The vast majority of peasants in all areas of the country are now settled in registered development villages organised in line with the villageisation policy. A Village Council of 25 members is elected by the villagers to run the village government and 5 Village Committees elected by the villagers have specific planning, mobilisation and administrative functions. Production is based on individually owned block farms and/or livestock and village joint economic activities where villagers to a varied extent produce cooperatively.

In the industrial sector, the TANU Guidelines (Mwongozo) of 1971 called for the socialist transformation of work relations at the site of production, including factories, ministries, and so on. Worker struggles to transform capitalist work relations were the most advanced in factories, but later they were controlled and often violently repressed by the government. The Guidelines are nevertheless an ideological weapon in the hands of the working class in their day to day struggles in factories and other places of work. Their implication to the organization of schools and other education institutions has also been seized upon by progressive teachers and students in a movement to democratize their institutions, which also face repression but continue to develop.

There is now recognition by peasants and some others of the fact that, until the economic base of villages has been strengthened, providing employment opportunities in small-scale industries and in youth agriculture cooperatives, and minimum basic social facilities, and higher personal incomes, the youth will not willingly and productively remain in rural areas. The problem is not primarily the form and content of schooling, but rather, the social and economic conditions which have led to a deterioration in the standards of living of peasants and low-income workers. Hence, youth demands for economic and social development reflect peasant and worker demands, and are not to be isolated as a "school leaver problem".

COLONIAL EDUCATION

Education reform directed to the kinds of problems briefly outlined above was implemented during the colonial period within the context of struggles for national liberation. A dual education, pyramid-shaped system emerged, whereby the vast majority of those receiving any schooling (only 40% of the total school-entry aged population in the late 1950's) were structurally rejected from schooling through a combination of selective examinations and growing school costs by Standard IV. The primary education received was mainly literacy, numeracy, catechism and manual-vocational work rooted in farm work. Post-elementary levels were divided into manual vocational and literary streams and only the latter could compete for entry into secondary education which developed primarily during the 1950's. Such reforms culminated in the middle-school agriculture syllabus of the 1950's which had a high component of manual work on farms and in carpentry and other workshops. The stated objective was to produce adaptive and more productive peasants who were willing to return to the local community as "progressive farmers". Ultimately the reform was dropped because of a combination of forces, the most important being resistance from an alliance of peasants and petty bourgeoisie to the imposition of second-rate, manual-oriented education different from the literary education found in urban-based schools and in the secondary school and demanded by employers.

EDUCATION FOR SELF RELIANCE

Worsening economic conditions and escalating class contradictions in the 1960's were reflected in the phenomenon called the "primary school leaver problem", the migration of village youth to towns in seach of wage employment or some form of non-farm employment (and repetitive of the colonial "middle school leaver problem"). Another expression of underlying contradictions was the crisis around the University students rejection of compulsory national service. Transformation of the schooling system in line with socialist "aspirations" was identified as one way to resolve such problems. ESR had multiple features, only some of which have been selectively implemented thus far, but all of which have been recognized as goals for education reform. Here we are talking about practice in general; socialist educators have succeeded in reorganizing individual schools into facsimiles of socialist education at both primary and secondary levels, but this is so in spite of contrary forces emanating from within the education system and outside of it.

ESR policy includes the following: the promotion of critical, creative thought and problem-solving ability; self-confidence; cooperative attitudes arising out of cooperative organisation of work in the school, classroom and in school economic activities; the integration of mental and manual work; the transformation of the school into a farm and/or workshop and the transformation of the factory and/or the village into a school, the integration of school and community.

Despite explicit directives in the ESR document that implementation should not become the mere sending out of the school children to do manual farm work as a separate activity, to become incorporated into exploitative labour relations, this is in fact the way the policy was immediately interpreted in practice. Every primary and secondary school has "ESR" activities on its timetable, and teachers, students and the masses in general have accepted the idea that productive work is a part of the school programme. Bureaucratic evaluation of ESR implementation usually concentrates on quantitative measurement of output in volume and in value form, including the contribution made towards recurrent costs of the schooling system as a whole. Hance, in the recent budget speech of the Ministry of National Education and Youth (Elimu ya Taifa 1980a: 12-13) the discussion of production is entirely a report on proceeds of pupil labour, including school by school outputs calculated by price at secondary level. Total output of primary and secondary schools and teachers' colleges contributed 7.2% towards recurrent expenditure of 1978/79 (Elimu ya Taifa 1980b).

This is a significant achievement, in the sense of making the primary and secondary school a place of work, of having "school work" mean both mental work and manual work. However, the organic integration of mental and manual work has not been achieved in this way. Nor has the organization of work been a cooperative one, which leads to student dissatisfaction and resistance of various forms, including the "go-slow". Teachers tend to decide what kinds of productive activities to engage in, including crop choices and the work calendar itself, and then they supervise student labour which is assessed on an individual rather than a collective basis. The productivity of student labour has not been raised through the development of new skills and knowledge in the process of productive work. Too often yields per acre or manhour are lower than that of an average peasant, which also reduces community respect for school productive activities.

MUSOMA RESOLUTIONS: EDUCATION AND WORK AND UNIVERSAL PRIMARY EDUCATION

Concern about the implementation of ESR overall, and the relationship between mental and manual work in particular, led to criticisms at all levels, from the masses to intellectuals and Party leaders. Dissatisfaction with schooling outcomes, the phenomenon of illiteracy of primary school leavers, youth discontent with village conditions, teacher complaints of an overloaded school curricula, the development of a secondary school leaver problem - these are some of the phenomena which conditioned the Party's call for integration of education and work and universal primary education in 1974 Musoma Resolutions. The secondary vocationalisation/diversification bias programme was accepted as one aspect of education and work. All secondary school students combine academic coursework of a uniform nature with a particular vocational bias, the latter a combination of classroom instruction and productive/practical work. The biases are agriculture, commerce, technical and domestic science, with each school having one or two biases, which are taken by students for all four years of secondary school. Approximately 20-25% of classroom time is devoted to the practical bias, with an additional 10 hours of productive work per week.

There are different interpretations of the bias programme: (1) productive activities are a practical concretisation of classroom instruction, emphasising experimentation; (2) they are oriented to manual productive skills in preparation for manual or semi-skilled work after leaving school. The programme is only now being fully consolidated with adequate equipment, qualified teachers and a full curriculum. Graduate agriculture teachers are being produced at the Morogoro Faculty of Agriculture, Forestry and Veterinary. Diploma-level teachers for biases are produced through special teacher training courses given to technical specialists. Plans are underway to produce graduate-level teachers in the other biases. In the meantime, expatriate teachers have had to be imported. Another problem is the large number of subjects and classroom periods per week, averaging 12 subjects at Forms 1 and 2, and 45 periods per week; at Forms 3 and 4 there are about 9 courses ranging from 38 (Domestic Science) to 49 (Technical) periods, with 10 hours of productive work and 2 hours of games in addition. Within bias coursework, the ratio of practicals to theory is 9:4 for agriculture and 8:5 for Domestic Science (no information given for other biases - see Elimu 1980b).

Controversy has also arisen over differential "payoffs" of each of the biases; the hidden streaming within each school such that the brighter students are placed in a special, often "science-based" stream; and the different opportunities for post-secondary education, training or job placement.

Musoma Resolutions also stressed the policy of making every workplace a school, which has been implemented through workers education programmes which include adult functional literacy, vocational skills training, secondary level of education through classroom instruction and correspondence coursework. There are a vast number of different education programmes under way which are oriented towards peasants and village leadership. These include SIDO vocational skills training, post-primary vocational wings, combined production/training projects being set up by the Christian Council of Tanzania, small-scale industries established as village cooperatives with training components, village leadership training under the Prime Minister s Office and so on. The attractiveness of such programmes is heavily determined by whether they lead to employable skills and higher incomes, which in turn is determined by the dynamics of rural transformation and the rate of exploitation of the peasants. So long as the rate of exploitation remains high, the peasants and their village governments cannot generate and accumulate enough surplus to sustain viable small-scale industrialisation, pay for development and social service projects, and build a massive home market for manufactured goods. The high rate of exploitation of peasants conditions the form and content of ESR and education and work in primary and adult education, as peasants and their youth struggle in education, production, marketing and elsewhere to survive and to subsist at higher levels of reproduction. Villageisation represents one mechanism to contain such struggles and also generate more surplus. Through villageisation peasant labour is being transformed into higher levels of collective labour, expressed in heightened class consciousness and class struggle. It is important to stress, therefore the dialectical nature of Tanzanian education reform and the villageisation policy.

The Musoma Resolutions literally demanded Universal Primary Education (UPE) by 1977, a result of the struggles surrounding the 1973 and 1974 villageisation movement. Until 1974, less than 50% of primary school aged children ever went to school, although the majority who did enrol in primary school received a full seven year education. Once settled in development villages, peasants demanded the services which had been promised to them, primary schooling being the number one demand. UPE has in general been achieved, and has required a tremendous commitment of local and national resources to train and pay teachers, build classrooms and teacher houses, provide textbooks and notebooks. A long distance teacher training programme was initiated whereby primary school leavers who have worked in their village for three years were chosen by their villages for a combined part-study, part-work teacher training programme of three years, after which they become full-fledged Grade C teachers. Productive activities are a part of the time-table in courses at the Colleges of National Education training Grade C and Grade A teachers for primary level, and Diploma teachers for Secondary. However, these activities are organised in most colleges as in primary schools, with similar problems of separation of mental and manual work, non-cooperative forms of organisation and the reproduction of a very low level of technology.

Musoma Resolutions also called for a major reform of the examination system at primary and secondary level, to ensure that both mental and manual work and character are assessed on a continual basis and taken into account in final selection. A reformed examination system began in 1974 at secondary level, combining continual assessment and final examination to include practical and written work, combined with a general assessment of character, productive work and cooperation with others. Continual assessment is completely controlled by subject teachers, with no student participation, a major drawback in an otherwise promising change.

Primary school examinations have not been changed along such lines, and secondary school selection continues to rely primarily on Standard VII multiple-choice paper examinations in Kiswahili, English, Mathematics and General Knowledge. Continual assessments of written work, productive work and character are recorded and used for preliminary selection for Form I, but has a minimal impact on final selection. Mechanisms for secondary school selection are a political issue when only 5% of Standard VII leavers have places in Form I, a proportion which will be reduced to close to 1% when the first UPE cohorts reach Standard VII. Many primary schools have never "gotten" a child into secondary school, whereas others "succeed" in placing 16-20% each year. When only one or two are selected from rural schools, peasants are quick to point out that they are usually children of teachers or other government functionaries. Clearly going to secondary school remains the primary objective of primary schooling, given the economic conditions analysed above. Indeed the Musoma Resolutions also called for secondary school expansion, geared towards technical training, but general expansion has been tightly controlled thus far.

'UPLIFT THE QUALITY OF EDUCATION' CAMPAIGN

Around 1978 what could be called a campaign to improve the quality of education was begun, in answer to the criticisms noted above. This has led to the re-establishment of an inspectorate programme, reduction of periods in the primary school timetable and reduction of the school week to Monday through Friday, so that teachers are free on Saturdays to prepare lessons and take care of domestic needs. Science is combined with Agriculture Science beginning at Standard III level. The MTUU programme of in-service training has been reorganised to expand the number of teachers who participate in 3 month residential courses at the college each year. Each year 8,139 teachers will participate in this programme (out of the target group of 102,000 teachers) which has been given top priority and replaces the Grade C pre-training residential course (the long-distance one continues). Teachers will take a 9-month correspondence course prior to entering into the residential programme which begins in 1981/82. At the same time, college tutors are attending special three-week seminars to improve the quality of literacy and numeracy training and primary school teaching.

COMMUNITY SCHOOLS PROGRAMME

In 1978 the Minister of National Education announced that all primary schools would follow the community schools programme pioneered by the Kwamsisi School attached to the Korogwe College. In 1975 all Colleges were directed to establish pilot schools/villages along Kwamsisi lines, and in the 1980 Budget Speech it was announced that the programme would expand to Dodoma and Singida Region schools. The programme is an attempt to organically integrate school and community in line with ESR and villagisation.

School productive activities are jointly planned, managed and evaluated by villagers, teachers and students and focus on experimentation in line with classroom instruction. Teachers and students participate in village productive activities where the emphasis becomes increased production. The first two standards concentrate primarily on reading, writing, Kiswahili grammar and arithmetic. Geography, History, Domestic Science, Health and some Sciences are integrated into the Environmental Studies oriented first towards local village conditions. Villagers teach local history, technology and the arts and oral literature. The school becomes an adult education centre through various programmes. The School Committee consisting of villagers, teachers and students plans school projects, does research, evaluates and organises pupil involvement in village campaigns, Emphasis is on the promotion of (1) agriculture and good health in the village; (2) socialist values and cooperative organisation; (3) critical and creative thought and problem solving ability; (4) basic literacy and numeracy skills. The target group are villagers and pupils, with the school a catalyst for village development (Mapunda 1979).

Colleges contribute to the initial development of the programme, through joint research with villagers on potential economic activities, and continue to provide guidance throughout. Itinerant teacher educators are attached to each "pilotschool/village" to guide the programme and link the village and school to the college and to relevant government cadre. This close guidance and feedback may be effected during the expansion phase by the need to spread college resources much wider than before. The primary inspectors could contribute to the programme, but only if there is a genuine change in their method of work.

CONCLUSION

Tanzanian education reform combining productive activities and education, education and productive activities, is conditioned by social and economic conditions often called "underdevelopment" and expressed by a level of poverty which is unimaginable to citizens of industrial capitalist countries and which is not experienced by the urban-based Tanzanian petty bourgeoisie who administer reform. There can be no socialist education without social transformation at all levels, including the destruction of exploitative capitalist relations of production; the rapid development of the productive forces, human and technical; and a cultural revolution in the organisation of work and in all social relations, within the family, the school, the village and urban community, and in all other spheres of human activity.

At the same time, education reform may contribute to the creation of the economic, ideological and political preconditions necessary for the Tanzanian socialist revolution. Class struggles in education have material effectivity; they are also conditioned by class struggles in other spheres. Class struggles underlie struggle over interpretation of "education and productive work" which have been outlined above and which continue.

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CHAPTER XI

Quality and effectiveness of work-experience programmes in Third World schools: strategy for international support

SUMMARY

This paper summarises the results of field study and literature search on the topic of work-experience programmes in Third World schools (Sinclair & Lillis, 1980). Problems confronting work-experience ventures are presented under the headings of programme rationale, strategy for innovation, and choice of content. The suggestion is offered that resources should be fed into an expanding network of innovative schools with staff seeking to develop programmes suited to particular local conditions and having real meaning for local pupils. Each school would serve as both a curriculum development and teacher induction centre, and teachers associated with its work would later initiate innovative programmes themselves. This network development strategy would serve either as a means of introducing work-experience programmes where they were absent from the school programme or as a means of steadily upgrading the quality of an existing programme.

The normative - re-educative strategy of building up a cadre of educators personally committed to innovative work-experience programmes is seen as having potential at international as well as national level. The creation of an international network of such educators, with regional subgroups, is seen as the most effective basis for international action.

The international programme might then incorporate:

- newsletters (international/regional) linking network members
- regional meetings
- materials development projects, based on selected schools and teacher training institutions
- small grants to support action research projects within national networks of innovative schools
- educator secondment/training programmes, involving participation in the work of these innovative institutions
- research projects and case-study documentation, serviced on a continuing basis by a research and development team attached to an internationally recognized institution such as the International Institute of Educational Planning

It is suggested that the network development approach offers a means of feeding international funding and, very important, reinforcements of motivation through international contacts, into national efforts to develop work-experience programmes - programmes that must, by their nature, be aligned to the highly diverse production conditions, and social, cultural and political conditions, in which the schools have to operate.

It is suggested that as a preliminary to the main international programme it would be most useful for a small group of persons with experience in this field to visit Third World centres and persons active in the development of work-experience ventures. This would permit compilation of a most useful handbook of materials and methods as well as delineation of the optimum structure for an ongoing international programme.

Introduction

This paper relates specifically to the introduction of work activities into the regular schedule of Third World schools. (Other approaches - factory assignments, residential schools which are also full-scale farms, may have greater potential but require a resource base often lacking in the Third World). There have been repeated attempts to balance the hours schoolchildren spend at their desks with hours spent in agricultural, craft or other productive activities. These initiatives have followed different organisational patterns, have embodied different content, and have been integrated more or less closely with the rest of the school curriculum, yet they have shared one thing in common: implementation problems have loomed large, so large that numerous ventures have come to nothing. Nor has the situation changed. Schemes in operation today encounter similar problems and are far from securely established.

Analysis of past ventures indicates a lack of realism among policy makers as the most basic problem of all, and a constant source of failure. Examples:-

1. Programme objectives/rationale. Policy makers have been wildly over ambitious in the objectives specified for mass work-experience programmes, leading initially to the confusion in the schools and subsequently to disillusion on the part of the general public.

2. Scheduling of the innovation process. Policy-makers have failed to think clearly about the many stages and transactions needed for programme outlines specified by government spokesmen to be translated into detailed and effective programmes in operation in the schools.

3. Resource requirements for meaningful activities. Policy makers have failed to take account of the lack of resources - land, water, tools, cardboard, money, to buy a reel of cotton, etc., in many schools, so that pupils may be left cultivating half a rice plant or making a quarter of a cardboard model as their term's experience of productive work.

These aspects of programme development(1) are explored more fully below, and lead on to consideration of the scope for international action. Meanwhile, it may be suggested that any international initiative to encourage the introduction of productive work into Third World schools should be designated as providing assistance in the articulation of carefully designed innovation strategies, thereby helping convince politicians at national level that without some basic material resources, and the full-time and part-time assignment of some of the country's best educators to the development process, little of value can be achieved.

OBJECTIVES AND RATIONALE: PEDAGOGICAL, ETHICAL AND PRACTICAL VALUE OF PRODUCTIVE WORK IN SCHOOL.

Objectives cited in support of work-experience programmes have included:

1. Conveying useful knowledge and skills to backward communities
2. Giving pupils prevocational and vocational knowledge and skills leading to increased productivity when they enter the labour force
3. Influencing pupils' attitudes, especially to create a habit of acceptance of, or positive motivation towards, manual occupations or rural life.
4. Developing qualities of character conducive to social stability and worker productivity, such as moral rectitude, perseverance, creativity, self-reliance and cooperation; and where applicable, developing loyalty to socialist or other (e.g. Gandhian) ideologies.
5. Lowering the unit costs of schooling through the sale of pupils' craftwork or agricultural produce.
6. Attracting pupils to school; and improving the effectiveness of general education programmes through greater local relevance and use of activities as a learning aid.

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(1) Corresponding broadly to sections 4, 5 & 6 of the conference agenda.

Objective 1 has been typical of the objectives cited for 'relevant' schooling in rural areas not yet served by government extension services, as in the rural schools programmes of inter-War Mexico and the Village Institutes teacher training programme in the Turkey of the 1930s and 1940s. Where the process of 'development' has progressed further, the emphasis has shifted to objectives 2 and 3, particularly to containing the aspirations of school-leavers for modern sector jobs. Sometimes political spokesmen emphasise objectives of this kind while the educators responsible for implementation cite more limited objectives such as the beneficial effect of using book learning in a practical context.

These various objectives have been characterised as over-ambitious. Briefly,

Objective 1: parents do not want to be told how to run their farms by mere youngsters and may not have a margin of error above subsistence production to try out new approaches.

Objective 2: the teaching force is ill-prepared for disseminating production skills superior in the local context to those available in the community, nor are younger pupils able to learn such skills.

Objective 3: attitudes to rural life are predominantly influenced by the huge differentials in level and security of earnings between the modern and traditional sectors of employment, and even the most charismatic teachers could hardly overcome this factor.

Objective 4: there is no clear link between curriculum and character

Objective 5: pupils are often too young to produce the quantity or quality of goods needed to offset school costs appreciably, and many teachers do not have the expertise to guide them.

Objective 6: despite earlier complaints about the irrelevance of schooling, parents are not generally attracted to schooling by work-experience programmes, and may even let their children play truant during work periods; only organisational factors within the education system, however, limit the benefit to the general education process of providing for locally relevant activities during the school day.

In particular, objectives 1, 2 and 3, the objectives that attract political leaders confronted with grave social problems, are difficult of attainment. Where development is held back by lack of irrigation water, transport facilities or rural credit, for instance, work experience programmes alone are unlikely to generate a new prosperity - multi-agency programmes would be required for that. True, the very presence of productive work on the timetable may help pupils to adjust to the idea that schooling does not lead to privilege. As against this, however, a badly conducted programme may lead to ridicule and to attitude shifts opposite to those intended.

Despite these limitations, many educators believe that work-experience and other practical activities can serve as a useful counterbalance to bookish Third World schooling, with some possible spillover of benefits of a practical or attitudinal nature. They could argue on intuitive grounds that work-experience should have a place in the curriculum parallel to that held by established subjects such as history or geography. The important question for them is not whether objectives 1 to 5 can be fulfilled but, much more manageable, whether it is possible to operate work programmes of educational quality comparable to that of orthodox programmes in the same school.

In other words, the rationale for work-experience should be that it is too important to leave out of the curriculum process, that it is needed to provide curriculum balance and to anchor the school to its local environment. This view leads on to the search for an implementation strategy generating high quality, locally-relevant programmes, programmes that will hold pupils' interest and not bring the work-experience concept into disrepute once again.

STRATEGIES FOR THE INTRODUCTION OF PRODUCTIVE WORK INTO THE EDUCATIONAL PROCESS

The categories of planned innovation developed by Chin & Benne(1969) are useful here. The 'power-coercive' approach is typified by the government edict that all schools must introduce work-experience programmes forthwith, as in Tanzania's 'education for self-reliance' programme launched in 1967, or Sri Lanka's 'prevocational studies' programme launched in 1972, for pupils at junior secondary level. A variant was the compulsory introduction of work-experience in the schools of Maharashtra State, India, moving from 10% of grade 8 classes in 1972 to 100% in 1973 (following earlier trials in pilot schools). This strategy generates a wide spectrum of performance, with a few schools offering excellent programmes and a large tail of schools offering programmes so ineffectual as to undermine the future of the venture as a whole.

A second strategy, the 'rational-empirical' approach, depends on the logical appeal of an educational innovation as the means of its dissemination. Governments have sometimes supplemented this appeal with the offer of a substantial grant of resources to a limited number of schools. A rather well-conceived example was the introduction of the 'earn-as-you-learn' programme in Rajasthan State, India. School principals who believed in earn-learn and who were able to convince the Education Department of their commitment to the idea, were considered for the grant of workshop facilities where pupils could earn small sums of money outside the hours of formal instruction. Local communities in Ghana likewise showed an interest in obtaining workshop facilities under the so-called 'continuation school' programme.

Finally, the 'normative - re-educative' strategy implies that work-related school projects can have limited durability and very limited impact unless the teachers concerned have internalised the rationale of the programme and also acquired the knowledge and skills to operate it with confidence. In-service teacher training attempts this but is usually too brief. Pre-service training might be more successful, if teacher trainers were in sympathy with the new approach. Often, however, training colleges are far from innovative, and vocational teacher trainers and their subjects may be at the bottom of the status pile. A further weakness of both teacher training approaches is the dispersion of ex-trainees into a school system where the work-experience innovation is often unwelcome.

An alternative type of normative - re-educative transformation process might be devised, drawing upon the lessons of the last twenty years in respect of curriculum innovation generally. In the USA and the UK, for example, the curriculum development projects of the 1960s and early 1970s were found to achieve very limited uptake in the schools though schools and educators who had participated in the development programmes often remained loyal to them. This bitter experience led to experiments with curriculum development programmes centred on schools rather than initiated by remote development teams; for example, by bringing a group of neighbouring schools into an innovating consortium serviced by curriculum specialists (Rudd, 1973). In this way, teachers can have specialist help in overcoming the particular difficulties of creating an innovative programme suited to their own schools, plus group support to maintain their motivation, and outside recognition to help maintain or raise their standing in their schools; meanwhile, they gradually internalise their commitment to the innovation in question.

These ideas may be relevant to the achievement of worthwhile and viable work-experience programmes in Third World schools. A small population of interested schools (rural and urban, small and large) would initiate substantial research and development work in the field of work experience, serviced by full-time and part-time curriculum development officers. Care would be taken to ensure that the projects were seen by pupils and parents as providing an increment in school resources and not as diminishing existing academic provision. School hours might need to be extended, but additional resources would be available since teachers and school principals would be seconded to these schools to participate in the development work and thus become technically and motivationally prepared to initiate similar programmes elsewhere - leading to an expanding network of innovating schools. A caution here: the network delineation and expansion should be kept flexible and unbureaucratic. There should be encouragement for any school to initiate innovative work-experience programmes, thereby helping locate the latent pool of creative talent among the teaching force that was such an encouraging feature of the Sri Lanka prevocational studies programme, for example.

This strategy could serve as the basis for introducing work-experience into an education system or as the means of upgrading an existing nationwide programme. An analogous strategy has been in operation in Tanzania, where the development of new curricula aligned to the policy of 'education for self-reliance' has been undertaken jointly by Colleges of National Education and pilot schools, for gradual dissemination throughout a system of schools that are already operating more limited ventures on the theme of self-reliance.

THE WORK EXPERIENCE INNOVATION AT SCHOOL LEVEL

The need for training and motivation of educators (including teachers, principals, and also district education officers) has already been stressed. Equally important is the realistic tailoring of work-experience schedules to available material resources. These vary in quantity and quality and a rigidly structured programme is often totally inappropriate. The primary and middle school agricultural programmes introduced in the then Tanganyika of the 1950s fell foul of the many local differences in agricultural conditions, as well as in the acreage and slope of land in individual schools - as documented in detail in the Fuggles-Couchman report of 1956. Even a totally unstructured programme calling for the use of local resources may run up against lack of land or water, or extended agricultural slack periods, such that the agriculture slot in the timetable will mostly be spent at the desk. Craftwork likewise needs a basic minimum of resources, including some simple carpentry tools with which to make tools for other crafts.

Ways around this might include:

1. International sponsorship of programmes to develop the intermediate technology of productive work, suitable for school use (see Sinclair & Lillis, 1980, and Sinclair 1977, for further discussion of this approach.)

2. Development of the concept of mobile units, housed in vans attached to development centres/innovating schools, to supplement and help upgrade programmes operated by individual schools.

3. Broadening the innovation concept to include a mix of practical activities, including sport, art, etc. (as in a recent experimental project in Tamilnadu).

There has been a great deal of discussion regarding the extent to which work activities should be integrated with the rest of the school curriculum - academic subjects or the 3Rs. Gandhi laid particular emphasis on productive work as a centre of correlation for the school curriculum but many teachers found it difficult to achieve more than nominal correlation (Salamatullah, 1963 & 1964). A basic handicap is the lack of reference facilities and expert advice faced by teachers in rural and even urban schools. There is an urgent need for international sponsorship of documentation (prepared in a form appropriate to work-experience teachers) providing specific information about individual food-plants, animals, pests, craft materials and processes - written in lay language but with scientific and technical terms in footnotes to help specialist teachers. These materials could be used in the schools or adapted to local conditions and translated into local languages at a curriculum centre. These materials could be used also by work experience teachers and/or by subject teachers wishing to link their teaching to the practical work undertaken at the school.

A further point. Digging a field in the blazing sun while the teacher relaxes under a tree may not always achieve any desired outcome in the pupil! One reason for using the term 'innovation' throughout this paper is the belief that new types of organization and presentation, and an ongoing process of experimentation and adaptation, are vital for the work-experience venture to be wortnwhile. Principles of procedure experimented with in the past - leaving endless scope for future research and innovation - include:-

1. Finding ways of conveying the rationale of the work-experience programme to pupils (and their families) and enlisting their sense of idealism, where appropriate.

2. Finding ways of involving pupils in planning and administering the activities.

3. The teacher to share the work and lead product and process development.

4. Finding ways of increasing the interest and reward of the work:
   (a) variety and newness of activities
   (b) maximisation of pupil choice
   (c) immediate earnings in cash and kind
   (d) provision of follow-up support for ex-pupils

5. Finding topics and procedures permitting small group and individual project work

6. Guiding pupils to cooperation rather than competition (exams)

7. Use of local resources, demonstrating unperceived potential of the local environments

8. Involving pupils with local people and outside experts

(Kale, 1973, & private communication)

International support:

Network development. Third World ventures in work-experience can only be effective if tailored to specific local conditions, but the numerous difficulties encountered at local level indicate the scope for an infusion of energy and resources through international support. Education administrators have to face intense and changeable political pressures on the topic of work-experience, and a heavy work-load - building up science programmes, or the teaching of a second language or indigenous culture, etc., in addition to teacher transfer requests and parental placement pressures. The existence of a programme to build up an international network of institutions and educators in the sphere of work-experience could give much needed support and stimulus.

How might the process of international/regional network development be supported? The basic components might be:

- newsletters (international/regional)
- regional meetings

- materials development projects, based on selected schools and teacher training institutions
- small grants to support action research projects within national networks of innovative schools
- educator secondment/training programmes, involving participation in the work of these innovative institutions
- research projects and case study documentation, serviced on a continuing basis by a research and development team attached to an internationally recognised institution such as the International Institute of Educational Planning

Research themes. The five categories of research listed by Vielle (1978) may be useful in this context, viz. research on research, research on the functioning of the education system, research for planning, research on content and methods including curriculum development, and action research.

Preliminary work. As a preliminary to the delineation of this programme it would be most useful for a small group of persons with experience in this field to visit Third World centres and persons active in this area and to compile a handbook of materials and methods for publication as well as suggestions for the development of an ongoing international programme.

CHAPTER XII

The problems and prospects of an integrating and functional educational formula

No thinking and acting individual can fail to understand the importance and relevance of productive work in education, as a means of providing fuller participation in social creativity.

In fact, the traditional system of education as it currently exists in the developed countries and, by extension, in the developing countries is still selective and hence does not offer young people the fullest opportunity to participate in working life.

Year by year and in varying socio-economic situations, devaluation and experience both point to the shortcomings of this system apparent in the relatively high wastage rate in education despite the substantial investment the public authorities continue to make in it. According to figures prepared by international bodies, the amount spent on education in relation to the gross national product is approximately 8% in USSR and USA and approximately 10% in Algeria excluding funds earmarked for vocational training. If this expenditure made at the cost of much sacrifice is looked at closely, it emerges that investment in premises and equipment takes up more than 90% of the funds available, to the detriment of student training. If this imbalance were to continue to increase, it could lead to an accumulation of property out of all proportion to the human resources available.

If the product of this system is carefully examined, there is evidence of a fragmentation of authority and responsibilities, and of an erosion of the value of education and culture. In many cases, students who complete this traditional form of education have difficulty in contributing to the economy of the country, because of the failure of the education system to adapt to the requirements of employment. If, however, one adopts a certain Western, rational viewpoint, this system can find good reasons in its own environment for producing, consuming and reproducing, following the same routine and in accordance with a theory which is unrelated to the practical experiences of the individual, because its strategy is based to a greater extent on sophisticated educational techniques and on knowledge amassed by the upholders of the elitist system. Without going into all the details, the failure of this system was shown up as much as ten years ago, by many specialists in the field(1).

Developing countries, more than developed countries, seem the most affected by the shortcomings of the traditional education system.

In view of the evidence, there is a tendency to think that an academic education represents the only reliable means of access to the highest paid and most influential positions in the capitals of the world. True it is that, for a small percentage of fortunate students, scholastic achievement does lead to a successful career, but the bulk of young people whose success eludes must inevitably join the ranks of the "rejects", with the accompanying risks of unemployment and underemployment.

In Algeria, as in all other countries, especially developing countries, most young people, who make every effort to enter school, harbour few illusions as to their chances of success, and if they decide to remain in the system it is because there is no alternative and they really have no choice in the matter.

On the pretext that there exists an order of values, the traditional system of education has moved completely away from real-life experience by failing to include in its curricula any reference to the social practices which form the basis of the attitudes and behaviour of the social group and its relations with the environment.

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(1) From the extensive literature available on the subject, describing the failure, deadlock and crisis in which education finds itself, Philip H. Coomb s The World Educational Crisis. Paris, IIEP 1967, is particularly recommended.

The intrinsic value or identity of the individual is rejected as soon as it no longer conforms to the norms of the education system. For years now, therefore, anything which suggested any kind of traditional experience handed down orally, manually or even spiritually, has been discarded in favour of a "mechanical and codified knowledge". This is what has undermined social practices relegating know-how and experience to a position of secondary importance.

Even though knowledge is imparted at school by modern methods of information and analysis, this in no way compensates for the deterioration of creative imagination and the decline in social communication.

The supremacy accorded to the standard form of education to the detriment of social activities, or in other words of productive work in education, is mirrored by the crisis of the world economy, itself a product of the modern industrial era. The resources deployed in the different branches of the economy, and their cost, are disproportionate when compared to the number of unemployed workers and social misfits. Even beyond the question of employment, there is evidence of a concentration of wealth and manpower in the major towns, with the acknowledged hazards of wastage, absenteeism and social difficulties, and disinvestment and depopulation in rural areas.

This brief commentary on the gap which exists between academic success and productive work reveals a growing need to review the relationship which should exist between education and the acknowledgement of social practices. This document does not claim to provide the answer. Our main concern is to define a system of education which is integrated, integrating and participatory and capable of including productive work. To this effect, teaching methods must be reconsidered and even invented, so that an educational system geared to progress can be replaced by a system which recognizes its limits. This means that increasing prominence must be devoted to the definition of subject-matter, educational methods and structures which relate to individual and collective experience of a specific environment.

Productive work in education must be organized in a combined system which prepares the individual for employment and, at the same time, treats practical experience as something valuable which enhances cultural and scientific knowledge. This system brings the educated person closer to the reality of life. As a result, it gives direction to a renewal of education in which the individual being educated, establishes himself as someone conscious and creative. This system is not new. Historically, science and culture have emanated from man, from his dealings with nature, and from his industry. Productive work is the basis for man's self-fulfilment. This being the case, any improvement in production or the quality of life is dependent on the level of culture and technology of the productive forces of society.

The proposed system of integrated education, equating work and education, would prove to be better adapted to the social relations involved in production. Their capitalization (theoretical and practical) increases material, institutional and human resources in a better utilization of potential, and raises their productiveness for the benefit of society as a whole.

The validity of such a proposal must be assessed in the context of the international crises of education and the economy and the problems which they engender.

It should be stressed that the gap between education and economic development, a gap which should be closing, continues, on the contrary, to widen.

This doubtless explains the emergence of a quite widespread consensus of opinion within international organizations (Unesco, OECD) urging the adoption of a global educational strategy which offers either a policy of alternation or the choice of an alternative system or one which is adapted to the environment.

In Algeria, productive work in education is seen as an overall, national issue. During the fifteen years that have elapsed since independence, several attempts have been made in this direction at all levels, and particularly at the People's University, in State schools, in certain centres for the mass elimination of illiteracy such as the National Centre for generalized Education, (CNEG), the National Centre for the Elimination of Illiteracy, (CNA), the training centre for intensive sociology, and the Institute of Management and Planning (IGP), through "appropriate" University entrance examinations and, currently, mass functional literacy work, and at the Institutes of Technology. Countless seminars have been held on this subject, including those held in 1968, and in April 1978 at Sidi Fredj, organized by the Centre for studies and research into Education and continuing promotion. These exploratory activities correspond to a large number of innovations which have been proposed, planned or undertaken in many different national contexts to supplement or replace the conventional system of education.

The application of the Charters of socialist management, of the agrarian reform and of the national charter, and the need to increase production and productivity clearly necessitate a break with the myth of the single system of education, and a search for a way in which to rally all the vital forces necessary to independent, economic development. The recent introduction of the basic school in Algeria is a step towards the desired goal.

The integration of social practices with education is something which will contribute to the productivity of science and culture because it is rooted in the social environment. Such practices are the foundation for the affirmation of the national cultural identity. Similarly, productive work in an educational context is a means of recuperating the social potential not fully utilized by the traditional system of education, a potential of an extraordinary but undeveloped intelligence, which must be more fully exploited.

This meeting, therefore, is being held at a very opportune moment for the deliberations needed in order to perfect a really functional system of education, continuous in time and space, in its techniques and resources, and in respect of both quantity and quality.

Out of our deliberations will come a new system which will lead mankind away from the well trodden paths of the current system of education, so that man will become the agent of his own education, through the constant interplay of his own actions and thoughts(1).

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(1) Cf. Resolutions passed by Unesco at its nineteenth session in Nairobi (October November 1976).

THAI Quang Nam

CHAPTER XIII

The promotion of productive work in education in Vietnam

This is a preparatory document for the meeting of experts on the promotion of productive work in education and is in two parts:

I. The first part summarizes the experience of integrating productive work in education in the Socialist Republic of Vietnam.

II. The second part describes our own personal research concerning that experience under the auspices of the International Institute for Educational Planning (Unesco) since 1978.

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THE EXPERIENCE OF VIETNAM WITH THE INTEGRATION OF PRODUCTIVE WORK IN EDUCATION

1. The general problems of education in Vietnam

Despite a long and devastating war and the far reaching consequences of overseas dependence (witness 80 years of French colonization and the position of South Vietnam during the American War), Vietnam has achieved a great deal in the field of education. To begin with, in quantitative terms, the general system of education currently caters for 12 million schoolchildren, there being 300,000 teachers, and 20,000 schools in a country with a population of 53 million inhabitants comprising sixty different ethnic groups. In qualitative terms, the changes have been equally as extensive. Illiteracy has been virtually eliminated, and supplementary adult education provided for a large proportion of the working population. The national language, previously considered as just a vernacular, has become a language of general communication used at all levels of the education system. There has been a change in the social origins of schoolchildren and university students, and most of them now come from the underprivileged classes. Education has contributed, in addition, towards rectifying the cultural backwardness of various ethnic minorities.

The organization of education in Vietnam has closely mirrored the different phases of the revolution. During the first phase, from 1945 to 1960, in line with the national, democratic revolutionary movement, the aim was to eliminate illiteracy to establish an education system covering the whole country, to provide an education based on the national language and, finally, to associate education with resistance activities. During the second phase, from 1961 to 1965, only a socialist system of education was organized in the North of the country, providing:

- pre-school education for children between 3 and 6 years
- primary education for children between 7 and 11 years, over a 4-year period
- intermediary education for children between 12 and 15 years.
- secondary education for children between 15 and 18 years.

There was a third phase distinguished by the devastation of war and the great defence effort (1965-1975). This period witnessed significant achievements in education. In particular, a great step forward was taken with the development of adult education side by side with the formal education system, and this did much to raise the cultural level of the working population. Since the reunification of the country in 1976, marking the beginning of a new period, one of the main objectives of the new education policy has been the standardization of the system of education throughout the country and the organization of education in the Southern provinces (formerly South Vietnam) along more national lines. A new education reform was drafted, with a view to solving the major structural difficulties facing the national education system. We shall mention some of these difficulties here. Despite certain basic changes, the education provided remained "academic" and was not entirely suited to the circumstances. There was a kind of rural exodus caused by the desire of educated young country dwellers to leave their villages. Teacher training was insufficient and the social status of teachers often low. Moreover, University still being the ultimate aim for many schoolchildren and their families, there was a consequent tendency towards certificate-hunting. The greatest shortcoming, however, lay in the quality of education available and the teaching methods used, which followed a repetitive, trial and error approach, and did not attempt any conscious adaptation of educational innovations.

2. Productive work and socialist education

Recourse to productive work as a form of education did not, in fact, derive from any particular educational theory, but sprang mainly from the need to find solutions in keeping with the country's situation, which was that of a developing country, and one which was also at war. From the outset, however, the idea of integrating productive work with education, one of the fundamental principles of socialist education, served as the back-drop to the search for these solutions. In fact, in 1960, at the 3rd Party Congress of Vietnamese Workers, a resolution concerning Vietnam was passed as follows:

> "Our system of education must have as its main objective the training of the younger generation with a view to producing a working class capable of running the country and possessing a profound awareness of the meaning of socialism, a good general culture, technical knowledge and good health, in a word, whole men to help build the new society. Education must also be instrumental in training experts capable of contributing the economic and cultural rebuilding of the country, and it must likewise play a part in the continuous process of raising the cultural level of the workers."

The proposed method of training was as follows:

> "The realization of this educational objective requires us to adhere strictly to the principle of associating instruction with productive work and to a combination of theory with practice, of study with activity, and of education through schooling with education by society."

From the outset, productive work was included in the curriculum in varying degrees. It is done in a regular way in the school workshops and gardens and, in addition, once a month, teachers and students join in road and embankment repair works, retimbering projects, workshop construction, etc. This occasional participation in productive work gives young people the opportunity of acquiring a practical understanding of what is involved in building the nation, and it also provides considerable resources. At the same time, taking part in productive work has an undeniable educational value. In fact, applying this educational principle provides the framework of a kind of polytechnic education, introducing students to the essentials of basic production processes and giving them the necessary skills to handle the most elementary machinery. To avoid any departure from the application of this principle, a definition of the main objectives proved necessary, viz.:

- to introduce a new approach to manual work;

- to combine theoretical knowledge with technical knowledge, to teach students the application of their scientific knowledge to productive activities, to add to the knowledge acquired from practical experience and from life;

- to form habits and skills which will permit the production of material wealth;

Every effort must therefore be made to avoid an exaggerated concentration on the technical and productive viewpoint, and to emphasise the educational and instructive aspects of integration of productive work in education.

* * * * * *

The current move in the socialist Republic of Vietnam to develop the system of half work, half study schools, is the result of an intermingling of theories based on marxism and the general policy of the Vietnamese Communist Party and practical teaching experience gained in various pilot schools, the oldest and best known being the School of Young Socialist Workers in the province of Hoa Binh in North Vietnam. This school was opened in April, 1958, in a mountainous region, and it has successfully and creatively applied the principle of combining education with productive work as a solution to both its educational and financial difficulties. The school day is organized, according to the formula (4 + 4 + 1 + 3)

- 4 hours of class work
- 4 hours of productive work
- 1 hour of sport of cultural activities
- 3 hours of study in the evening

The syllabus is the same as that followed in standard general education, with the provision of supplementary instruction in agronomy, technology or economic management more suited to the immediate needs of the students and based on the requirements of productive work.

The success of the Hoa Binh school was such that it was immediately hailed as avant-garde. During 1970, a vast national campaign was launched with the slogan "Study and follow the example of the avant-garde schools". As a result, more than twenty schools similar to the one at Hoa Binh were opened in the provinces. The most recent figures at the beginning of the 1975-76 school year showed 36 half study, half work schools, similar in style to Hoa Binh school, scattered throughout North Vietnam. In the South, four half study, half work schools were opened at the beginning of the 1976-77 school year.

More recently still, the integration of productive work with education has been tried in other ways, depending on the location of the schools and the kind of production unit with which they are involved:

- in mountainous regions, the school is attached to a State farm;
- in the plains, efforts are being made to speed up the pace of work of the sessions devoted to productive work.
- in towns, the system is much less firmly established, due to the characteristics of the urban environment. An initial attempt at integration has been undertaken in Nam Dinh in the town's textile combine.

3. Education and productive work in the context of the new education reform

After the reunification of the country in 1976, the emergence of new tasks occasioned by the development of socialism throughout the country, and the need to create a new culture, led to the preparation of an education reform with the aim of establishing a standardized system of education and of associating education more closely with the movement of national recovery. One of the main objectives of this reform concerns the gradual introduction of the work-study system throughout the national education system. In a recent decree of the government Council (1978), the importance of productive work in these new schools was stressed in the following points:

> "Productive work should be organized in such a way as to ensure the educational and scientific nature of these activities, in keeping with the requirements of socialist production.
>
> Every week, under the supervision of teachers or technical instructors, students will take part in five to six work sessions, each lasting 3 to 4 hours.
>
> A careful balance must be maintained between studies, work, leisure and rest. Sufficient time should be allowed for sport, artistic activities and community life".

It is recommended that these new schools should be organized on a fairly flexible basis, two main examples of which are given below:

- schools linked with a firm supplying materials, equipment and technical training. The school undertakes the organization and management of the students' work; local authorities must undertake the construction of local buildings.
- schools which have an independent production unit. In this instance, they will be considered as local economic units whose production will be included in the general plan of the area to which the school is attached, e.g. a district, a zone of new economic development, an independent territory for ethnic minorities.

The traditional type of school is clearly no longer able to assume its due role in the new phase of rebuilding. They are thus gradually being replaced by the half study, half work system, which is seen as the cornerstone of the new system of education.

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Abdul Jabbar TOWFIQ

CHAPTER XIV

Productive work in education in Gulf Arab States

OBJECTIVES

This paper has been written to be one of the documents that will be presented at the expert meeting on the promotion of productive work in education, which is to be held at Unesco's headquarters in Paris from 24-28 November, 1980. It is an attempt to present and analyse efforts undertaken in the Gulf Arab States to promote productive work as an educational factor in elementary and secondary education.

More specifically, the objectives are:

1. To present and discuss different types of productive work in education that have been introduced as part of general education in both elementary and secondary schools in the Gulf Arab States with reference to:

    (a) Characteristics of each type
    (b) Main objectives
    (c) Areas of training

2. To show the major effects of these types of productive work in education on:

    (a) Structure of education
    (b) Content of education
    (c) Teacher training
    (d) Examinations and research

3. To conclude with some remarks concerning problems and future activities in this areas.

To achieve these objectives, the writer has mainly depended on his own experience and on the analysis of some documents and publications on the theme of this paper.

As an operational definition, productive work in education means different types of practical activities introduced as part of education in elementary and secondary schools in the Gulf Arab States.

Types of productive work in Education

Several years ago, manual and productive work did not form part of education as it should. It was, however, introduced in two informal ways at the student's choice:

1. Productive work as an extracurricular activity;

2. Productive work for the preparation of a school's annual exhibition.

Gradually, more attention has been given to productive work in both primary and secondary education. Nowadays such work has been introduced in two other formal ways, and is considered compulsory:

1. Productive work as part of the school curricula;

2. Productive work activities as the main part of some new types of schools particularly at the intermediate and secondary levels of education.

The above mentioned four types of productive work activities can be considered as four stages in the development of productive work in education in the Gulf Arab States. The same four types, however, are still introduced in one way or another in several countries. Thus existing types of productive work in education represent stages of its development at the same time.

Productive Work as an Extracurricular Activity

Productive work as an extracurricular activity has been introduced to students at their free choice, in both primary and secondary education, being practised through their hobbies, available to any interested student outside the regular class hours.

The quality and quantity of such activities tend to be affected by several variables:

1. The availability of qualified and interested teachers;
2. The availability of active and interested principals and supervisors;
3. Quality of the school building and the availability of facilities and raw materials;
4. Socio economic status of the community.

This type of productive work activities is common to almost all Gulf Arab States. The kinds of activities, however, vary from one state to another and from one district to another, and sometimes from one school to another according to their levels, sex of students, and locations. Productive work activities are also influenced by the implicit objectives of the school. As stated in most documents, the main objectives are to provide students with manual skills to help them use their leisure time in productive work, to train them to work cooperatively, and to change their attitudes towards manual work.

However, the actual objectives of training students in many cases may be to prepare some materials that can be used as audio visual materials in teaching or to help in the maintenance of the school building and gardens.

Examples of such activities are: agriculture, carpentry, cooking and sewing in girls schools.

Productive work for the preparation of a school's annual exhibition

Special care has been given to productive work in many primary and secondary schools in the Gulf Arab States when they hold their annual exhibition. In such schools, large numbers of students usually participate in different kinds of manual work throughout the year. Varieties of products are made to be exhibited.

This activity is very useful in achieving some of the above stated educational objectives, but it has some disadvantages: it is not common for all students and the activity is introduced for the purpose of the exhibition only.

The advantages of preparing an annual school exhibition can be summed up as follows:

1. It has become one of the important activities which promote productive work in education;

2. To some extent, it has a positive role in changing attitudes towards manual work;
3. It has helped teachers to be involved effectively (with their students) in manual work activities;
4. New relations have been developed in the school and community.

Productive work as part of school curricula

Productive work has been regarded as an integral part of the content of education. A number of hours have been set aside for productive work in both primary and secondary schools, two hours a week usually being allocated for this purpose. In addition, Iraq allows two hours a week for agriculture in rural elementary schools.

Much care has been given to productive work in intermediate and secondary schools. In Kuwait, two hours a week for productive work have been introduced in both girls' and boys' schools. Wood work, electronics, technical drawing, typing and secreterial work are examples of the areas covered in the training of the students. In both Iraq and Bahrain, 1 2 extra hours a week are devoted to productive work in girls' secondary schools, where training in sewing, cooking and decoration is offered.

Productive work which is offered in girls' schools seems to be more useful and effective because of the trained teachers. Areas that are covered in boys' schools, such as carpentry, which is introduced in all Gulf Arab States except Oman, is usually taught by untrained teachers. The same thing can be said about weaving, which has been introduced in Saudi Arabia, Kuwait and the State of the United Arab Emirates.

Some objectives of introducing productive work as an integral part of education in Gulf Arab States can be summed up as follows:

1. To enable students to get more experience and make use of such experience in their lives;
2. To change the attitudes of students towards manual work;
3. To develop the manual skills of the students;
4. To increase students' knowledge about the importance of manual work in human life and the socio economic development of their country.
5. To train the pupils in scientific thinking and problem solving.

It will be noted that much has been expected of education in this area. There is a need to translate these objectives into very specific and operational ones. The type and amount of work which is introduced is not enough to achieve these afore-mentioned objectives.

Productive work activities as a main part of some new types of schools

New types of intermediate and secondary schools are emerging on an experimental basis in some Gulf Arab States.

Industrial arts sections have been established in 30 intermediate schools for boys in Iraq, introducing training in carpentry, electronics, mechanics, ceramics and industrial drawing. A similar type of instruction known as credits system, has been established in Kuwait for both boys and girls.

Some of the objectives of these schools are:

1. To develop students vocational interests;
2. To help students to continue their vocational studies;
3. To help students prepare themselves for vocational careers;
4. To train students in areas that can be beneficial to them in their present and future life;
5. To offer experiences which can help students use their leisure time in productive work;
6. To change the negative attitudes of students towards manual work into positive ones.

Comprehensive schools represent a new, experimental type of secondary education in several Gulf Arab States such as Iraq, Saudi Arabia and Bahrain. It is well known that this type of school emphasizes practical work in addition to academic subjects. The objectives of the establishment of these schools are similar to those of the intermediate schools mentioned before.

Both new types of schools can be considered as new attempts to promote productive work in education.

Major Effects and Implications of these Changes in Education

In spite of the fact that productive work has not yet been considered clearly as an integral part of the content of education in all schools, attempts have been started in this direction.

Some effects on structures, content and teacher training programmes have become evident.

The establishment of new experimental schools including productive work in their programmes has had the following effects:

1. Partial changes in the structure of secondary educational administration, where new sections responsible for those new schools have been established;
2. Changes in the types of equipment, school buildings and, as a result, of most arrangements in these schools, have created a new and different secondary school structure;
3. New curricula have been prepared, with stronger ties between theoretical and practical subjects emerging.
4. New kinds of teachers have been prepared. In Iraq a new department in the University of Technology, which is responsible for preparing engineers, has been established to train teachers for vocational education and this type of schools. Moreover, a number of short-period in-service training programmes for teachers are going on in these areas.
5. It is expected that such schools will have a good effect on the attitudes and vocational interests of students. In a recent study conducted to evaluate the influence of the students' training in industrial arts sections on their vocational interests, it has been found that such training encourages students' mechanical and artistic interests.
6. Research institutions have become interested in studying such new programmes. For example, one of the major projects of the Gulf Arab States Educational Research Centre is to study and evaluate this type of secondary education.

Some problems

There are many problems to be solved before this new type of education can spread throughout this area. Some of these problems are:

1. The required changes for these new schools are still partial and not comprehensive. This means that the changes introduced have been within the existing system rather than in a new one.
2. Evaluation and examination methods have remained mostly as they were before. Such procedures may make students concentrate on the usual methods of preparing for examinations, emphasizing the theoretical rather than the practical aspects.
3. Negative attitudes on the part of a large number of families stand as a barrier against the enrolment of their sons in such schools, because of the social prestige that still attaches to academic studies.

Final Remarks

This paper has presented a brief description and analysis of productive work activities in education in the Gulf Arab States.

There are still many questions to be answered and efforts to be made to develop new types of education that emphasize practical and productive work.

Unesco can plan an effective part in efforts in this regard, by such means as:

1. The conduct of evaluative studies of the existing attempts in secondary education;
2. The arrangement of meetings to define objectives and operational procedures for implementing new types of educational programme.
3. The conduct of experiments with the cooperation of other Member States, in this field.
4. The publishing and distribution of information about some new types of secondary schools.

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Report

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I. INTRODUCTION

1. The international meeting of experts on the promotion of productive work in education was held in Paris at Unesco House from 24 to 28 November 1980, in accordance with the provisions of the Work Plan laid down in the Approved Programme and Budget for 1979-1980 (paragraph 1355).

2. Fifteen participants invited in a personal capacity (researchers, education policy-makers, professional educators) gathered to define the role of productive work in general education as a component in the learning process and to assess its formative value; to determine the importance of productive work in general education in the light of educational, ethical, cultural and socio-economic objectives; to devise strategies for the introduction of productive work into general education, taking account of national and local contexts, and to identify the repercussions of these developments on educational systems.

The participants were selected on the basis of their experience and research in connection with the introduction of productive work into education.

3. At the opening meeting Mr. Henri Dieuzeide, Director of the Division of Structures, Content, Methods and Techniques of Education, stressed the interdisciplinary nature of the meeting and the wide range of professions represented by the participants. He recalled that the purpose of the meeting was to inform the Director-General of the most effective way of helping Member States to introduce and consolidate productive work in their elementary and secondary school curricula. The participants were required to examine how the reality of the world of work might be introduced into education and to define productive work as an educational component in the learning process. The conclusions of the meeting which would identify the activities to be undertaken and encouraged in the field of research, training and documentation and define the aid strategies to be adopted in regard to Member States, would be submitted to the 38th session of the International Conference on Education to be held in Geneva in 1981.

4. The participants elected the following officers: Chairman, Mr. G.B. Kanungo (India), three Vice-Chairmen, Mr. M. Figueroa (Cuba), Mrs. M. Mbilinyi (United Republic of Tanzania) and Mrs. M.E. Sinclair (United Kingdom), and a Rapporteur, Mr. Thai Quang-Nam (Viet Nam).

5. The participants examined two working documents, one prepared by the Secretariat (ED-80/CONF.627/3) and the other based on individual contributions by participants (ED-80/CONF.627/6) which they used in their discussion. These documents are annexed to the present report.

6. The participants decided in the course of the opening session to integrate the discussion of points 3, 4 and 6 of the Agenda and to add a further point, namely research and evaluation. It was also decided to organize the report as indicated in the table of contents.

7. The participants expressed the view that such meetings between researchers, practitioners and education policy-makers could constitute a possible model for the organization of research teams in this field: the theoretical background was indeed considerably enriched by contributions from workers and from those who came into contact with workers on production sites and in social life, while practitioners made it possible to transcend the somewhat determinist view of researchers concerning the organization of work and of productive work in education.

The participants recognized that the introduction of productive work into education, while posing many difficulties, was considered as a necessity and as an emerging reality in several education systems.

II. THE NATURE OF WORK: RATIONALE FOR THE INTRODUCTION OF PRODUCTIVE WORK IN EDUCATION

8. The nature of work was considered in the context of social and cultural realities and of the national and international divison of labour. The conception of work differed from country to country and also in accordance with social class (and social status). At work, productive processes had changed radically along with the status of the workers themselves or of young people entering the world of work. Quite frequently, work in the factories and workshops has tended to be organized on an authoritarian basis while young people, having been trained to adjust themselves to the working world, had found themselves without work and frightened with marginal status.

9. It was in the light of these relationships between the world of work and education that the various experiments in introducing productive work into education were examined. In the beginning, it was pointed out that the contradictions between the problems facing efforts to improve the status of work, particularly manual work, and the message inculcated by education, should not be underestimated. In many developing countries these contradictions revealed themselves in the form of a discrepancy between the low level of development of productive labour (agricultural, craft or semi-industrial work) and the educational expectations of schoolchildren and their parents. At the level of society as a whole, experience had also shown that the socio-economic organization of the society in question (centralized, planned, mixed or free-enterprise systems) influenced approaches to the integration of productive work into education. Moreover, some forms of learning through day-to-day living and social messages (competitive spirit, consumer attitudes, etc.) were also an obstacle to the achievement of the ideal model of productive work which tended to emphasize values of a different kind. In a large number of cases the resistance of adults (public opinion, certain families or teachers or certain categories of workers) also inhibited the development of schools combining educational and productive activities. In the most favourable case, when workers had some measure of control over the productive process, optimum conditions could be created for the integration of productive work into education. Hence, the school could be adapted to its environment (village community, unit of production in urban surroundings) and help to bring about important changes in that environment. The symbiosis also had a reverse effect with the community assuming responsibility for supplying the school with the material and technical equipment required for the success of the experiment.

10. It is essential, therefore, to conceive education and work not as closed and stratified systems reinforcing social class discrimination, where only lower socio-economic class youth were subjected to work experiences in school (as a substitute for the jobs, they could no longer find), but as a generalized value-oriented element in education in which all schools participated.

The purpose of value-oriented work experience should be (1) to stress the positive value of work for work staff; (2) to break down the social separation between manual and mental work; and (3) to stress the co-operative aspects of labour.

11. Value-oriented work in the educational context meant that work was to be organized primarily to concentrate on work itself and its impact on personality fulfilment and community development rather than its output. The purpose of "productive" work would be primarily to produce attitudes toward work rather than to use student labour primarily as a means of producing material output. These attitudes should be oriented toward the co-operativeness and usefulness of all work and against the competitive, utilitarian and hierarchical aspects of work. In practice, this meant teachers and community members working alongside students, and rotation of work, so that personal hierarchies did not

develop. It also meant that students in all types of schools (not just vocational schools, or schools for lower social class youth) participated in these education/work programmes, again stressing the value of manual work, and the co-operative nature of work.

12. The problem of the introduction of productive work in education was thus situated:

(a) amid the diversity of the economic, social, political, ideological and cultural conditions characterizing different societies, nations, groups and social classes, individuals, etc;

(b) not only as part of the school system, both primary and secondary, but in the framework of an overall view of education, both formal and informal, both initial and continuing, i.e. in the context of lifelong education policies and activities.

The introduction of productive work into education was described as an educational process embodying the multi-faceted development of the personality, in order to form individuals who would be creative and prepared to participate in the progress of the community; the process was differentiated with respect to the socio-economic and political characteristics of societies, classes, groups, etc. It was a process which was implemented as part of overall social practice applied according to specific procedures through the educational process, including work activities engaged in by students in their capacity as members of a school, but also through any other form of education within the context of dialectical changes in the educational system, the productive system and society in general.

The introduction of productive work in education called for the integration of education, production and research in the educational, productive and social systems. The participants in the meeting, however, fully realized the difficulties of such an integration.

13. Participants stressed that productive activity must imply the production of spiritual as well as material goods, manual and intellectual activity, the production of goods and services for the school, the community and the society. It was pointed out that a major component of such production was scientific and artistic activity which both educators and students should help to develop. Creating a poem, painting a picture, dancing, working in a laboratory - all these were productive activities, as were cleaning the school, taking practical training in industry, farming and sharing in the social life of a community.

14. What was the need for the introduction and promotion of productive work in education? A number of references to history were made, and it was pointed out that experiments in productive work in education had occurred in the history of education in a number of countries, before the introduction of the traditional formal schooling. The establishment of such a school appeared, in historical terms, as a result of a separation between manual work and intellectual work, between theory and practice and as a means of legitimizing and reinforcing this opposition.

The importance of productive work in education in contemporary schools might correspond to different needs in different societies. In the industrialized countries, unemployment among young people might underlie that trend, which was beginning to be reflected in a number of educational systems. In some predominantly agricultural societies, on the other hand, production - at every stage of life - was a necessity for the physical survival of the population. This contrast was only one example of the impact of the diversity of conditions upon the relationship between education and work during the initial training phase.

15. The diversity of economic, social, political, ideological and cultural conditions, traditions, and levels of development characterizing different nations, groups and social classes, individuals, etc., did not prevent the participants from reaching agreement on a number of principles concerning productive work in education.

(a) It was suggested that productive work should become an integral part of the entire curriculum and education process and not an addition to the school curriculum.

(b) When productive work is introduced into the educational system, it could not be other than an experience shared by all.

(c) The transformation of education structures was closely linked to that of social and productive structures, and consequently a qualitative improvement in work and education would affect both activities.

(d) Productive work in education should be combined where possible with the generation of working employment opportunities for youth.

(e) The integration of manual and intellectual work, rather than their separation, was one of the aims of productive work in school.

16. It was noted, on the one hand, that the introduction of productive work had met with resistance and other difficulties, and, on the other, that there had been experiments in which productive work had appeared as a powerful means of creating and developing those moral and social qualities which were essential to the balance and collective progress of communities.

It was generally recognized that most of the experiments conducted in the past or currently under way had encountered numerous difficulties. Research undertaken had shown that there were two categories of problems concerning the educational system and the productive system. Concerning the former, research had revealed that the introduction of productive work had in many cases not resulted in substantial changes in school curricula, and that there had been limited effort to associate teachers with this new approach in education and to train them for the tasks. With respect to the productive system, especially the formal sector of industrial production, research had indicated that either young people were integrated into production without any particular concern for their educational experience, or that their experience was relatively meagre as regards both intellectual and occupational training.

17. The different experiments analysed revealed, in all its complexity, the relation of children and young people to work. On the one hand, young people who experienced, in varying degrees, social exclusion and were faced by the problems of the employment in industrialized societies, and, on the other, young people in rural communities, who often saw rural economies deteriorating, refused or accepted with reluctance, productive work which helped to guarantee subsistence, but which had nothing constructive or promising to offer from the point of view of individual and collective development. The gulf between the aspirations of young people regarding the quality of work and the actual possibilities offered them by the productive system was another factor which made the relation of young people to work a difficult one. On the other hand, in some countries and communities there had been experiments involving collective participation in decisions concerning community life, social life and, to a certain extent, the productive system. In many cases, productive work experiments in out-of-school activities had proved to be a successful means of involving young people in experience of production, enabling them to live more purposefully and enjoyably.

18. The realization that the problem was not that young people refused work, but that work was organized sometimes in such a way as to discourage young people from taking up productive activities, should not be underestimated. It was also observed that the change in status of a pupil or young worker in modern society was a sociological fact often overlooked by educational institution authorities and by educators.

19. Another aspect of the relationship between education and work was the fact that a large proportion of children and young people received no kind of formal education. In fact, in order to survive, some children and young people were obliged to undertake certain kinds of work which, for the most part, was of very limited educational value. They were therefore deprived of an appropriate environment for the type of education that would foster their full social, intellectual, physical and aesthetic development which was considered to be one of the objectives of productive work in education.

III. IMPACT ON AND CONSEQUENCES FOR STRUCTURES, CONTENTS, METHODS AND EDUCATORS

20. The introduction of productive work into education was seen to be a process which either emphasized educational and social dualism, or transcended it, depending on the different historical circumstances. There were, on the one hand, experiments whereby productive work for all was introduced into a primary and secondary school without constituting a separate stream; but there were other education systems which, through productive work, strengthened the vocational stream at the initial training level. In other words, productive work was more often than not taught to children from the less privileged social classes or to those whose intellectual and creative capacities were considered to be limited.

21. The relationship between productive work and education was presented by and large in two forms. Productive work formed part and parcel of the whole education system; or productive work in education was the result of community action, or represented a project devised by the Minister of Education or by international intergovernmental or private Agencies. In some instances, both forms might exist side by side. In several countries reforms were under way with a view to introducing productive work into education by means of the gradual, general extension of the productive experiment and by pilot projects.

22. In those countries where pilot projects were under way, one of the most acute problems was the evaluation and general extension of experiments. This transition process often called into question most traditionally oriented education systems which were frequently not attuned to cultural and social problems. Nevertheless this transition should respect the specificity of the educational structure. By and large, it was observed that the introduction of productive work stimulated and was stimulated by, decentralization processes in educational decision-making.

23. In countries where schooling was a right the problem of productive work assumed a very different form from that to be seen in countries where education was a privilege. Where education was still a privilege, the contribution of the school to the welfare of the community through the production of goods and services (moving beyond any form of parasitism) was desirable, although it was observed that the social, economic and cultural context was often hostile to such transformation of the school.

24. Rational use of educational space inside or outside the school required communities, school establishments and Authorities of Education to find the least costly and most effective solutions in educational terms. Transforming the school into a centre for lifelong education was seen to be one possible way of involving the workers in educational activities and, thus, of really transforming the use of educational space.

25. The relationship between development projects, social projects and educational projects was fully apparent. Instances were given where rural producers, at community level, who saw (a) that education systems were lowering their barriers; (b) that research and educational centres offered substantial assistance for improving the quality of production; and who noted (c) any serious attempt to co-ordinate training, production and marketing of products, etc., could be the most effective agents in promoting integrated education, production and research experiments. On the other hand, rural workers who found that production carried out at school (a) reinforced social differences; (b) upset the marketing of farm products; (c) weakened, or failed to improve, the community's educational level, understandably prejudiced their children against productive work.

26. A school characterized by the promotion of productive work should be a teaching unit and a production unit, so far as possible, in which the organization and management of production along rational and educationally valid lines is in the last analysis the best guarantee of success. Consequently, it is important to stress the final point of these functions, as otherwise any attempt to integrate productive work with education would amount to nothing but a combination of heterogeneous kinds of teaching. While respecting the genuine needs of the educational process productive work and also social action generally have to become a fundamental element on which theoretical studies can be developed. The improvement of educational quality could not be left out of attempts to implement new teaching methods hand in hand with the introduction of productive work (enrichment of scientific and technological content, fresh integration of theory with practice), improving of moral, philosophical, artistic, physical and general culture.

It was noted that the integration of productive work with education could open the door to concerted forms of development action (community development, education about health or nutrition, etc.) involving the members of the school system and the local community.

27. The forms in which productive work were introduced into education might vary from one experiment to the next. There was, however, a common denominator in all such actions, namely permanent contact with the natural and social environment within which the school was located. The symbiosis thus achieved served in some cases to ensure that these experiments in the promotion of productive work would be successful.

28. The broadest possible participation (by parents, schoolchildren, other school-related workers, village people, city workers and the like) in the management of educational structures was regarded as essential, particularly in education systems or projects in which productive work was introduced. Participation was viewed as an essential condition for the motivation of those involved in any education/production initiative. While in some cases there might be a fairly pronounced contrast between the modest extent of scientific and technological knowledge of working people in relation to educational objectives, this could never be a reason for their exclusion if the school were seen as a centre for the continuing education of the entire community, young people and adults alike.

The participation of all the different people should involve in the educational process (teachers, students, parents) (a) participation in the surveys conducted in the community and workplaces in order to determine needs; (b) enrichment of the common store of scientific, technological, social and artistic knowledge; and (c) evaluation of the learning actually achieved.

29. A pre-condition of any action concerning the introduction of productive work in education was a knowledge of the community's actual economic, social and cultural needs. The disparity between supply and demand with regard to goods and services, wastage of the community's human and natural resources, the importing of costly and in many cases inappropriate technology, or conversely the failure to introduce new scientific knowledge - these had frequently led the adult population of a community to reject educational experiments at the initial learning stage, or caused such experiments to be misunderstood. These were the considerations underlying the proposed encouragement of surveys, efforts to achieve participation, and open debates within communities and groups affected by new experiments involving education and work at the initial learning stage; the people in question, of course, must also be informed of the findings of these surveys and efforts.

30. One difficulty which was frequently mentioned in connection with the introduction of productive work was the need to strike a balance between the theoretical and practical aspects. This goal may be achieved through: remoulding teaching learning process, by encouraging interdisciplinary and problem solving approach; enriching the relationship between the different participants of the educational process; limiting the ex-catedra teaching procedures; adapting education methods to the new needs created by the alternation of work and learning.

The following two questions, among others, were asked: Is it reasonable to assume that practical work done in a factory will encourage innovativeness and creativity in a student? Does productive work make self-training feasible?

With respect to teaching and learning methodologies, the main problems raised were those concerning the relationship between the teaching of particular subjects and practical experience, as for example the teaching of biology and its interaction with agricultural production, or the teaching of physics and its interaction with construction activities or activities related to the planning and use of educational, social and productive space, and so forth.

31. The awareness of the actual production and working conditions was clearly regarded as an integral part of a curriculum oriented towards a better integration of education and work, of theory and practice. The actual production and working conditions of the young and adult populations were an important aspect of the productive and social system which conditioned and would continue to condition the educational and productive experience of children and young people. The socialization through and for productive work should not limit itself to a passive adaptation to the conditions of existing demands of the work process, but should lead towards an active participation by students in the educational process in the social relations and conditions of work.

It is considered important not to underestimate the value of the actual products of work performed in school, since those products might constitute a satisfaction for the students, from a social, economic and/or aesthetic point of view.

32. Resource problems were recognized as constituting a limiting factor in many countries. It was stressed that for a comparatively limited expenditure of resources it would be possible to prepare guidelines on low-cost approaches to productive work based on research already conducted and which could be further encouraged in the developing countries (the researches in more developed countries associated with the ecological movement also being relevant here). The value to many curriculum development workers and teachers in developing countries of handbooks to support theoretical teaching directly related to production processes was also emphasized e.g. handbooks for reference by rural teachers coverin the scientific and practical foundations of agricultural and industrial processes.

The possibility of using mobile vans to bring new tools, reference materials and expertise to the pupils and also the teachers in rural schools was seen as having real potential also.

The possibility of building up locally relevant work and work-related programmes in a network of innovative schools and of expanding this network through movement of teachers associated with the programme was stressed as having great potential for the development of high quality programmes.

33. It was recognized that the introduction of productive work on education, work-oriented studies and technological education places heavy demands in terms of teaching personnel. The school made increased use of the contributions of experts from the community and the productive system; teachers were likely to feel a need to take practical training courses within the productive system (in the country, in industry, in services, etc.). Frequently, however, it was difficult for them to get in, especially in the case of the formal sector of industrial production.

Teachers at the primary level frequently came from the rural or urban community in which they worked, and thus possessed a knowledge of the social and cultural environment of that community. Such knowledge was coming to be a necessity for secondary-school teachers as well, who were often outsiders sent to work in the community for a short period.

34. The involvement of non-teachers (craftsmen, rural dwellers, local village authorities, workmen, etc.) in the school educational process facilitated the promotion of teaching methods based on a study of the environment. At the same time, efforts must be made to train or retrain traditional teachers to enable them to cope with the new problems posed by the integration of productive work into education.

35. In the more remote regions of several countries, the most important contribution to a better link between education and productive work was to make it possible for teachers with scientific knowledge to have access to these places. Hence the importance of experiments which had encouraged this access: mention was made of educators going on horseback to remote regions, or travelling in fishing boats to introduce useful knowledge for enriching the environment in these places of production.

36. The initiative taken by the grass-roots community, migrant worker associations, etc., in promoting activities involving students and workers showed, during reciprocal educational activities, how difficult this sort of encounter was; it was observed, however, that these difficulties did not prevent them from joining in common experiments (transmission of advanced agricultural techniques, rediscovery and/or learning of the national language, educational activities for second-generation migrant workers). But these experiments were all too rare, as well as being the only ones in which the workers had played a permanent and direct role in training. One of the issues raised regarding experiments to associate productive work with education was the absence - or very marginal presence - of workers in formal educational functions.

37. It was noted that many programmes designed to train existing or future teachersfor the introduction of productive work in education had failed to produce the skills and motivations required. It was suggested that the possibilities of associating existing and future teachers with new types of work-related ventures in schools themselves be experimented with i.e. the concept of training through participatory processes be explored.

IV. EVALUATION AND RESEARCH

38. The introduction of productive work into education broadened the concept of programme evaluation and tended to take new assessment criteria into account.

Participants unanimously considered that integration of productive work in education also meant integration of evaluation: formative evaluation and final evaluation were associated so that they might represent a constant source of feedback of use to teachers, pupils and the adults in the community who participated in education and production. The greatest difficulty experienced in evaluation concerned assessment of non-cognitive achievements: development of moral and social qualities, ensuring the unity of practice and theory, removing the division between manual and intellectual work.

39. Some argued that evaluation should be carried out from the outset; programmes should be evaluated as they went along, and evaluation tools and criteria should be developed. Some participants suggested that the actual practical effects of the experiment constituted the evaluation criteria. For example, one result of productive work was that young people learnt that it was important to create spiritual and material goods for the benefit of all, but this was something that could not possibly be evaluated. It was observed that it was possible only where objectives were very clearly defined at the outset.

40. Institutional and methodological problems were raised as regards evaluation. What was the ultimate aim of research and evaluation? To what extent could evaluation be made in respect of the objectives established by institutions (foreign institutions in some developing countries) or those proposed by young people, parents and the communities concerned? To what extent was it possible to reconcile institutional objectives with those of the populations concerned?

The need for fuller development of techniques of programme evaluation based upon the "descriptive evaluation" approach and action research techniques was stressed. In particular the possibilities for descriptive techniques at different levels of methodology were emphasized, since there are wide-ranging possibilities for participants in the educational process at school level (teachers, pupils, their families, workers, peasants and others) to undertake descriptive participation research as well as for full-time educational researchers.

41. Should evaluation be strictly limited to the internal educational structure or extended to the inner aspects of the social context? Should there be integration of these types of evaluation? The first findings of empirical research submitted to the meeting demonstrated the constructiveness of integrating these types of evaluation which made it possible to assess education in its entirety and not merely in its school dimension. The extension of research to the organization of work, rather than being limited to the introduction of productive work into education, posed problems concerning the relation between educational research and research concerning work which had hitherto been undertaken in parallel form. It was felt that there was a need for research into the difficulties and resistance encountered by any productive practice linked to the educational experience.

Wider research was suggested when reforms were adopted with a view to introducing productive work as one of their major objectives. It was the difficulty of that type of research which accounted for the very little evaluation and assessment work undertaken at this level.

As regards the procedures for research, there should be closer co-operation between researchers and the school, as well as immediate feedback of research findings to pupils, teachers, parents and communities.

42. The meeting showed that the problems of introducing productive work into education concerned, although on different scores, countries whose economic, social and cultural characteristics were dissimilar. If, in fact, one moved away from a purely school-oriented conception of education, it would be realized that only an élite of children and young people belonging to the privileged social classes and strata had no experience of productive work during school age. Different names had been given to the productive experiments involving children and young people; in some instances, they referred to different activities, in others, the activities were very similar in substance.

Hence, perhaps, the usefulness of comparative research and investigation to test and evaluate at the international level the results of these different experiments which hitherto had been studied more often than not in the homogeneous context of a single country, or countries with very similar characteristics.

43. The representative of the Director-General expressed the gratitude of the Organization to the participants for their stimulating contributions. He indicated that their suggestions would be examined carefully by the Secretariat. It was obvious however that implementation of these recommendations in their present form would call for resources far beyond those available in the 1981-1983 approved budget of the Organization, especially as regards resources allotted to research in this field. He therefore urged the participants to strengthen their present proposals by making concrete suggestions regarding the mobilization of national and international additional resources for the financing of research activities of the nature they recommended.

V. SUGGESTIONS

The participants presented to Unesco the following suggestions in the following sequence:

regarding objectives and modalities of operation (items 1 to 4);
regarding conceptual development (items 5 to 7);
regarding research and evaluation (items 8 to 11);
regarding the further development of programme content (items 12 to 14);
regarding training programmes (items 15 to 16);
regarding further meetings (items 17-18).

1. The acceptance at international level of the importance of the concept of productive work in education and work-oriented general education and of the need for Member States to support processes of information, collection, research, evaluation, training, etc. in this field, taking into account future goals for development as well as current realities.

2. The organization of a major international inquiry into actual programmes, experimental projects, research studies and plans in this field, drawing upon ministries, research institutes, universities, teacher-training colleges, teacher representatives, youth and students, organizations, community representatives, representatives of industry and others; this inquiry will take into account the results of conferences, seminars and meetings supported and promoted by Unesco. The results of this inquiry will be published by Unesco.

3. Unesco, with its educational institutes (IBE, UIE, IIEP) and its regional networks, ILO, can promote and support:

(a) international and regional seminars on a biennial or triennial basis and on an occasional basis as appropriate;

(b) the establishment of a newsletter or journal circulated to members and available to the public;

(c) training programmes, as described below;

(d) a system of grants available to support research, development and evaluation activities by institutions and specialists active in this field;

4. The further support of programmes at international, regional or national level to ensure an adequate flow of information between policy-makers and users (e.g. youth, teachers, parents and the general public) regarding the purposes, current development and future evolution of productive work in education and related educational ventures.

5. Having regard to the diverse meanings attached in different national and social contexts to the concept of productive work in education and to the contradictions that may exist between the perceptions of PWE held by different social groups (policy-makers, pupils and families), sponsorship of historical and analytical studies regarding the origins of this type of education and its significance in varied national and socio-economic settings and studies focused on procedures for clarifying and, where possible, resolving these contradictions.

6. Initiation of future-oriented analyses regarding the relationship between productive work programmes and work-oriented studies in schools, and the concept of lifelong education, elaboration of perspective studies and scenarios concerning the future evaluation of the nature and organization of the work process, including the distinction presently existing between manual work, intellectual work and research; including a consideration of the concept of the "work ethic", i.e. attitudes and value orientations - regarding work as an end in itself or as a means of profit, consumption, dominance, or fulfilment of a creative personality participating fully in society and decision-making. There have been tendencies in the meeting to include as some main features of the concept and practice of productive work in education, i.e. the working process performed by the students should have economical effect (not merely a simulation of work), it should be in relation to the social experience of the workers and their problems, the students should be socially motivated by solidarity and democratic participation, it should be oriented to the self-realization of the person.

7. Having recognized that the conditions of unemployment or of insecure poorly paid unskilled work faced by school-leavers and other youth in many countries limit the achievement of objectives and the implementation of programmes of productive work in education, such programmes of productive work in education in some cases can be combined with programmes for the generation of youth employment and that further studies examine the special implications of youth unemployment for the specification of productive work in education programmes.

8. International sponsorship of research and development studies, not only by individual specialists with recognized expertise in a particular field, but also on a co-ordinated basis, drawing upon the concrete situation in several Member States. These co-ordinated multilateral studies would necessarily be flexible enough to take account of differences in the local situation, local priorities and problems. In all cases, however, it would be necessary to make provision for feedback from participants in and users of the educational process including teachers, youth, workers and peasants. (The costs of co-ordinating such studies will be offset by their special utility in developing a more adequate understanding of the problems and possibilities of combining elements of productive work with the process of schooling.)

9. Having regard to these principles, the experts recommend a major international effort to develop techniques of descriptive evaluation and action research in respect of productive work in education and related programmes.

(a) techniques which will permit trained researchers from different origins to report more adequately on programmes of productive work in the regular school programme and in experimental schools;

(b) techniques which will permit trained researchers to report more adequately on the interrelationship between programmes of productive work in the schools and the wider socio-economic framework in which they take place - through depth interviews with pupils and their families, for example, and by other means;

(c) techniques which can be used by schoolteachers, student teachers, and others to prepare descriptive evaluations of programmes with which they are associated; drawing also upon the perceptions of pupils, parents, workers or peasants, and others concerned;

(d) these investigations to include longitudinal studies of ex-pupils as appropriate;

(e) these investigations to include cognitive attitudinal and psychomotor aspects of the work-based programmes, as appropriate.

10. Publication of a series of analytical case-studies regarding the historical and contemporary experience of different countries in the promotion of productive work in education, technological education, etc.

11. To support participatory research which focuses on specific productive work in education programmes in the context of the local community/district/regional/national setting:

(a) the focus to be twofold: (i) a dynamic focus of education based on productive work, e.g. in all levels of schooling; (ii) linkage to the development of productive activities in the community, including co-operative, youth production brigades, and factory attachments;

(b) Unesco input to include both educational and productive equipment, to be purchased locally wherever possible, as well as the training of local qualified people;

(c) participants to include community members, workers, community-level government cadres (health, education, medical, agriculture, nutritionist) and political leaders, youth, students, teachers and other school workers - outside researchers to provide guidance and co-ordination;

(d) in this context to support on-the-spot training of participatory researchers - teacher educators/itinerant teacher educators or participatory researchers-cum-teachers who would take part in such participatory research and become the cadre necessary to provide support, guidance and monitoring on a regional and national basis;

(e) throughout the "central co-ordinator/participatory researchers" and her/his team to be active in processes of intensive monitoring, training and analysis of the ongoing processes of change and development together with other participants;

(f) the programme therefore to have a built-in and continual evaluation process based on participatory research; and the programme at all levels (local, regional and national) to be adjusted to take into account the knowledge derived from participant research at particular stages in the programme.

12. As a matter of urgency, to undertake the following curriculum development activities having bearing upon many Member States:

(a) financial support for the preparation on a regional basis of a series of materials providing specific information about individual food plants, farm animals, pests and diseases, productive materials and processes, etc. - written in a manner suitable for use by rural teachers having no other reference materials (these handbooks to be used as required for work-oriented studies in all different fields as such or by teachers of the various school subjects, footnotes to be provided including extra information for advanced students);

(b) financial assistance for the translation and printing of these materials in local languages, if required;

(c) international sponsorship of programmes to develop the "intermediate technology" of productive work suitable for school use (drawing upon experience in developing "low-cost" approaches to science eudcation, when applicable);

(d) provision for the publication of materials based on item (c) in international and local languages, as required;

(e) financial support for experimentation, by selected Member States, with the concept of "mobile units", housed in vans attached to schools and colleges with high-quality programmes of work-oriented studies and productive work in education; so that pupils in rural schools may have the opportunity to work with tools and processes rather more sophisticated than would otherwise be possible.

13. To support regional or national workshops or seminars to prepare guidelines based on concrete experience, regarding the range of activities to be considered as "work-oriented" or "productive work", the organization and timing of work activities and technological studies for school pupils, and especially the principles of procedure required for effective work-experience programmes. Practical examples and suggestions for the involvement of pupils in the planning and administration of these programmes especially need clarification of this kind. Analysis of the conditions under which community members can participate in programme planning, administration, evaluation and execution, is vital.

14. Preparation of a factual handbook for educators incorporating the alternative approach to the production process and the utilization of resources as interpreted by the ecological movement.

15. Given the poor results from many past programmes of pre-service and in-service teacher training for productive work:

(a) to support experiments in teacher training and other educational personnel through extended participation in the process of innovation and research in designated innovative schools or colleges; and

(b) to support experiments in recurrent teacher induction through continuing participation in training programmes or through the services of educators and other specialists made available to teachers in their own schools (or groups of adjacent schools).

16. Provision for selected teacher educators, regional inspectors, school principals and schoolteachers to visit or participate in the work of innovative institutions outside their own countries; provision for long-term training in techniques, in programme evaluation, etc., as required.

17. In the perspective of the International Year of Youth (1985), to work towards a conference in 1985 on the theme "integration of youth in education and work", towards a Youth Forum in 1981 on this subject.

18. To convene a panel of researchers and users (young people included) during the meeting of the IBE in Geneva in 1981.

ANNEX I

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